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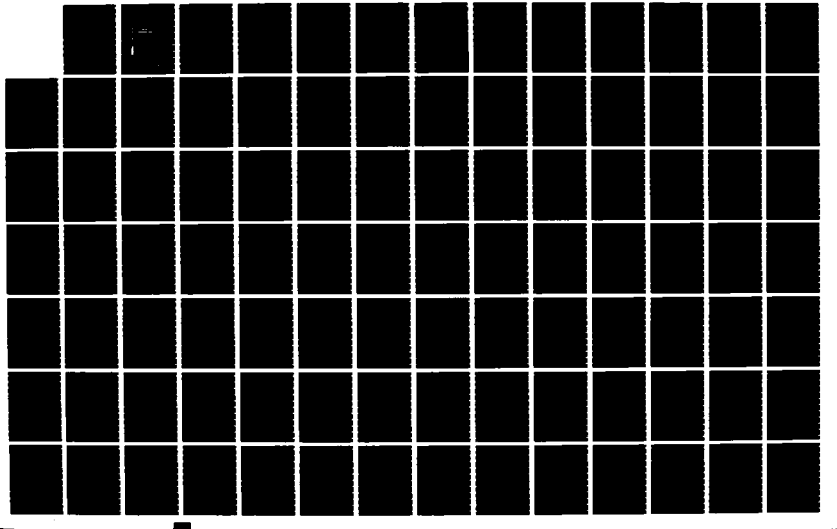

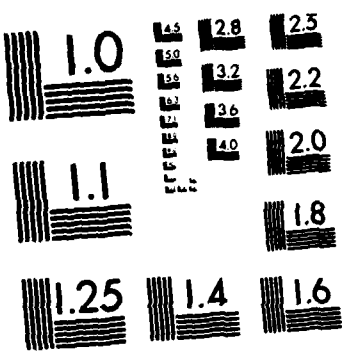

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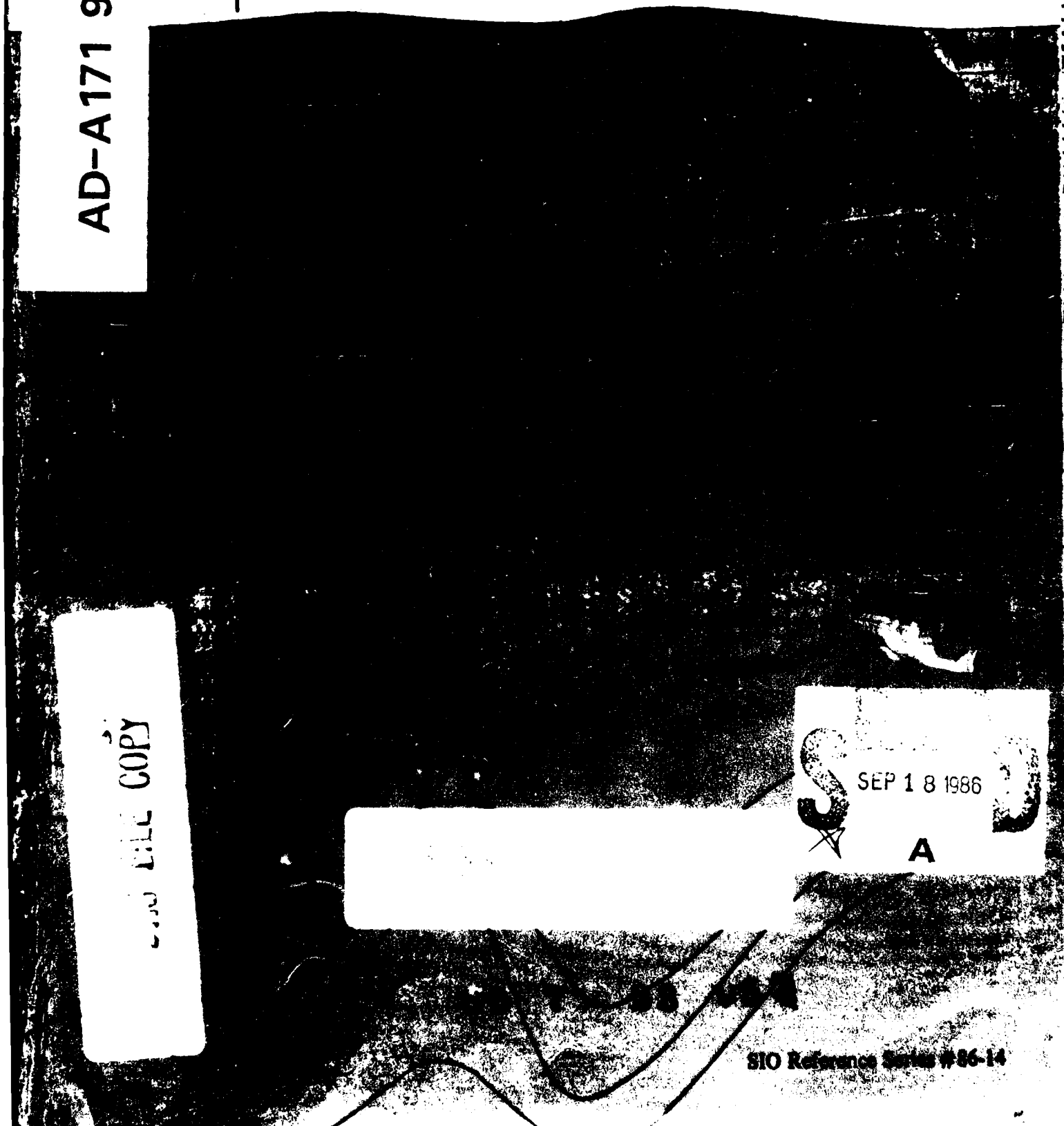

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OBSERVATIONS OF TEMPERATURE FINESTRUCTURE IN THE GULF OF CALIFORNIA

XBT Data Report

November 1984 / March 1985

Cynthia A. Paden

M. C. Hendershott

SIO Reference Series # 86-14

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ABSTRACT

This report contains XBT data collected in the Gulf of California as part of a cooperative research program between Scripps Institution of Oceanography (SIO) and Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE). Data were collected during November 1984 (Pichicuco VI) and March 1985 (Pichicuco VII) on board R/V *New Horizon*. XBT drops were made primarily in three locations: near a ridge at the northern end of Guaymas Basin and near the sills located at the southern end of Ballenas Channel and between the islands of San Lorenzo and San Esteban. Stations at these locations were repeated during various phases of the tide to observe changes in temperature finestructure and to describe the evolution of a frontal system near San Esteban Island.

Acknowledgements

The data presented in this report are in part the result of experiments designed and conducted by Dr. A. Badan-Dangon of Centro de Investigación Cientifica y de Educación Superior de Ensenada (CICESE).

The successful completion of this work was made possible with the help of many individuals: Roger VanWyckhouse of NORDA, Mississippi, lent the XBT recording equipment. His generosity in assisting us in the preparation and execution of this experiment was greatly appreciated. Thanks also go to the watch standers during the field experiment: Dave Muus, Walt Waldorf, Jim Wells, Janet Becker, David Stadille, Geoff Hargreaves, Pedro Calderon, and Juan Gaviño; the captain and crew of the R/V *New Horizon* who skillfully maneuvered the ship through 5 knot currents: Ana Carrasco for help in digitizing the XBT traces; Lynn Abbott, Jim Charters and Tom Hylas of the SIO Shipboard Computer Group for their assistance in the operation and maintenance of the digitizing system; Jennifer Davis and Vanessa Cunningham for help in shipping the XBT equipment; and especially to Nan Bray with whom we had many helpful discussions about the data processing.

The collection and processing of this data was funded by NASA/JPL Contract 956559, ONR Contract N00014-85-C-0104, NSF Grant No. OCE83-18288, and UC ship funds. The text was typed by Joan Semler and the graphics were done by Mike Clark.

INTRODUCTION

During November 1984 and March 1985, XBT surveys were made in the northern Gulf of California from the R/V *New Horizon*. These data, in conjunction with CTD, current, bottom pressure, and meteorological data (Bray et al., 1986a,b; Merrifield et al., 1986; Candela et al., 1984, 1985) were collected by Scripps Institution of Oceanography (SIO) and Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE) as part of the joint physical oceanography field program, Pichicuco.

The XBT drops were made in three locations: near a ridge at the northern end of Guaymas Basin, and near the sills located at the southern end of Ballenas Channel (Salsipuedes Sill) and between the islands of San Lorenzo and San Esteban (San Esteban Sill) (Figure 1). This system of sills separates the deep waters of the northern and southern gulf, permitting exchange primarily in the upper 500 m. Restriction of the flow, in conjunction with the large tidal ranges in the gulf, results in amplified tidal currents of up to 5 knots during spring tides (Bray and Robles, 1986).

XBT transects were made during spring and neap tides to look for changes in vertical temperature finestructure relative to both the semidiurnal and fortnightly tidal cycles. Surveys were also made through a cold temperature anomaly near San Esteban Sill to describe any changes in the size and horizontal temperature gradients of the frontal system which delineated this region of particularly strong mixing.

DATA ACQUISITION

Temperature profiles were obtained using Sippican T-7 and T-4 Expendable Bathythermograph (XBT) probes with nominal depths of 760 and 460 meters respectively. These probes contain a thermistor, with a time constant of approximately 110 m/sec, whose resistance is a nonlinear function of temperature (Sippican Corporation, 1973b). Output voltages were recorded simultaneously on a Sippican MK-2A strip-chart recorder and a Bathy Systems digital

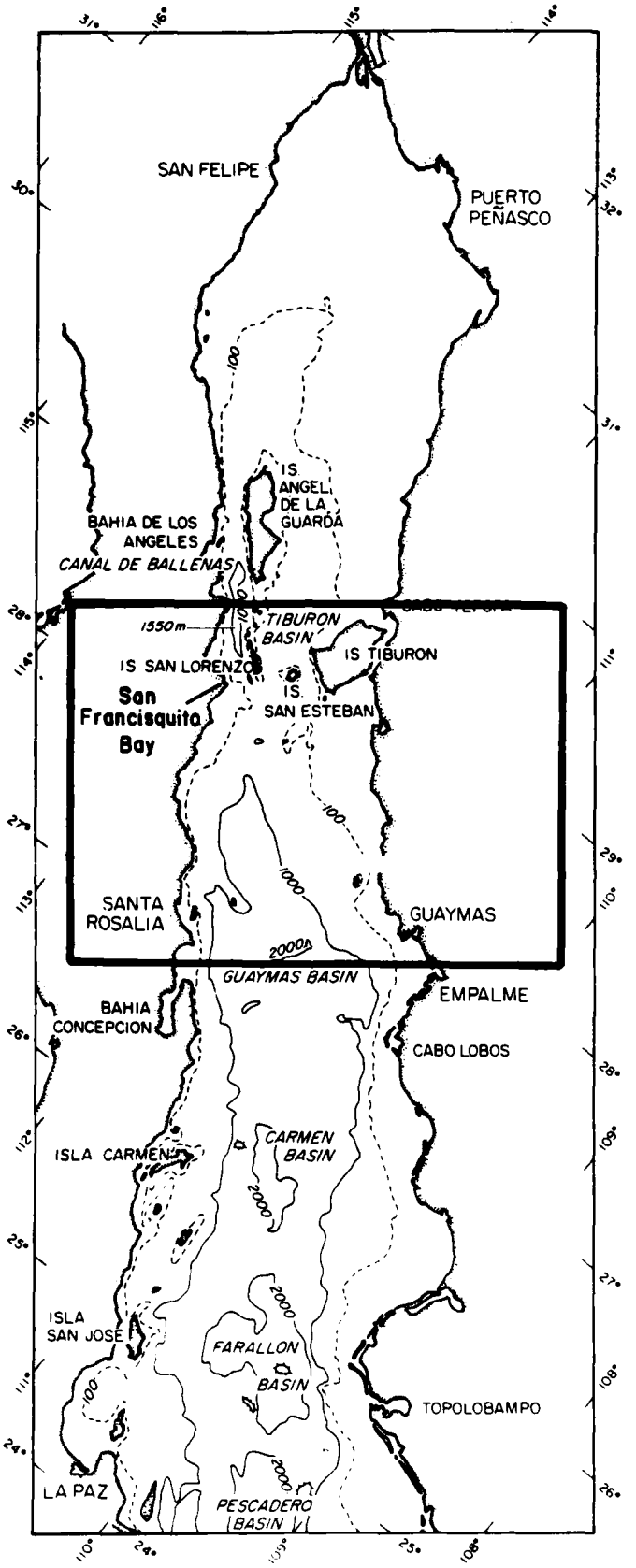


Figure 1. Gulf of California

recorder (Model SD-783-C).

During the November 1984 cruise the signal to the digitizer failed after XBT drop 45. The remaining stations for that cruise, XBT046-XBT176, were hand-digitized on a Bendix digitizer interfaced to the VAX-750 maintained by the SIO Shipboard Computer Group. In March, this problem had been corrected and Stations XBT201-XBT227 were digitized on the Bathy Systems digital recorder. The processing of the two data types is discussed separately below.

DATA PROCESSING

A. Bathy Systems Digitized XBT Data

Data acquired by the Bathy Systems Digital Recorder (Bathy Systems Inc., 1979) were written at 10 Hz to a BASF digital cassette. The data were decoded and scaled to obtain the station header information and corresponding time and voltage measurements (see Program XBTFS.FTN, Appendix A). Time is measured in tenths of seconds elapsed since the XBT probe entered the water. With an average fall rate of 6.3 m/s (Sippican Corporation, 1973b), this time interval corresponds to a depth resolution of approximately 0.6 m. Time is converted to depth by considering the fall-rate characteristics of the probe, the fall rate decreasing as the copper telemetry wire is unspooled upon descent. This change in fall rate is accounted for in the depth equation (Bathy Systems Inc., 1979):

$$Z = 6.472 * t - 2.16E-03 * t^2 \qquad (1)$$

where Z is depth in meters and t is time in seconds.

The output from the analog signal conditioning board of the Sippican recorder has a range of −0 to −5 volts corresponding to temperatures of -2.2 °C to −35.5 °C. To first order the temperature is a linear function of voltage. In actuality a small, nearly sinusoidal, correction must also be applied to account for the non-linear temperature-resistance characteristics of the XBT thermistor (Sippican Corp., 1973a). This is reflected in the equation for conversion of voltage to

temperature (Bathy Systems Inc., 1979):

$$T = A + B * V + C * V^2 + D * V^3 + E * V^4 \qquad (2)$$

A = -1.97539

B = 8.46492

C = -5.76449 E-01

D = 8.31771 E-02

E = -1.18495 E-03

where T is temperature in degrees Celsius and V is volts.

B. Hand-Digitized XBT Data

The output voltage also drives the pen of the strip-chart recorder. After calibration of the recorder, voltage is a linear function of distance along the X-axis of the chart paper. The chart paper is scaled such that the nonlinear relationship between temperature and resistance is taken into account and temperature/depth pairs can be read directly from the plot. Hand-digitization of the XBT traces is equivalent to deriving a voltage (after appropriate scaling) and nonlinearities must be accounted for separately.

Since the Bathy Systems digitized data could also be hand-digitized, an independent measure of the voltage range for the chart paper could be calculated. Voltages at particular depths for several stations were regressed against corresponding hand-digitized distances along the X-axis. The resulting conversion was 0.6995 volts/inch ± .004 with an offset of 0.032 volts ± .011 at the 95% confidence interval.

Provided the electronics of the XBT recorder are stable, the voltage scale should remain constant. However, drift in the mechanical components can cause the ~0 volt pen position to change. To correct for this offset in the hand-digitized XBT traces, the data are always referenced to the center calibration line. Distance along the X-axis is then scaled as volts using the

slope calculated in the regression analysis, and a voltage offset appropriate for referencing to the calibration position (CALIB):

$$V = (X - CALIB) * 0.6995 + 2.476 \quad (3)$$

Distances along the Y-axis were converted to time using the known chart paper roll-rate of 1/15 inch per second:

$$\text{time (secs)} = y * 15$$

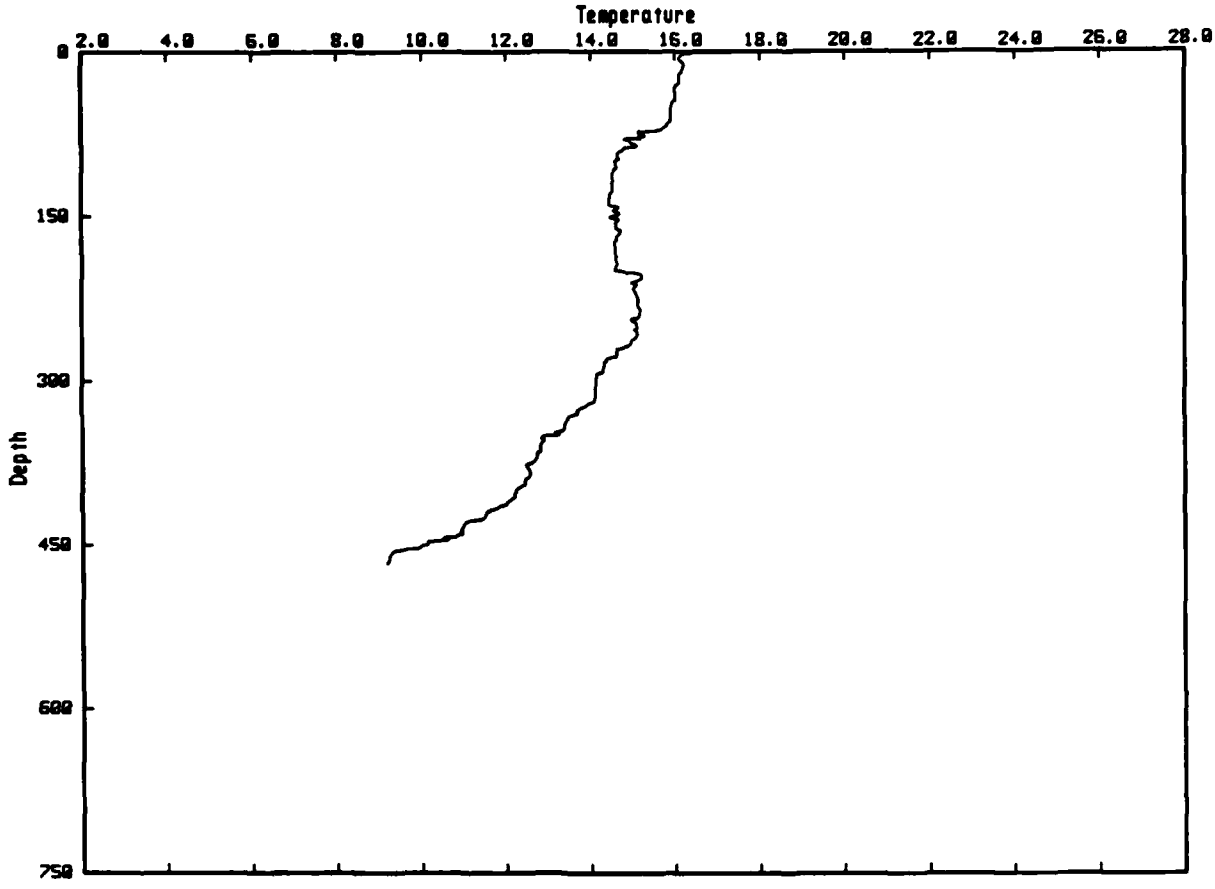
Temperature and depth were then calculated using equations (1) and (2) (see Program DIGSCL.F77, Appendix B). The depth resolution for the hand-digitized data varied from 0.5 meters to 3 meters depending on the digitization.

DATA CALIBRATION

Several XBT drops were made near or during CTD casts away from the sills for intercalibration purposes. Temperatures were compared at approximately 25 depths below the thermocline in 3 corresponding CTD and Bathy Systems digitized XBT drops. Temperature differences had a mean of 0.0 ° C and a standard deviation of 0.2 ° C.

Since the collection of XBT data can involve a variety of electrical problems (i.e. instrument noise, cable leakage, short circuits to the ship's hull, etc.), care must be taken in deciding whether a trace is in fact a reflection of the actual temperature structure in the water column. Both CTD and XBT data taken near the sills show a high degree of vertical structure. XBT drops 138 and 139 (Figures 2 and 3) were made during the down- and upcast of CTD Station PC6114 (Figure 4, [Bray et al., 1986b]). Significant changes in temperature finestructure occur on a time scale of minutes. Some CTD casts near the sill show apparent overturning events of approximately 50 meters with temperature inversions of 1 ° C and greater. Since, in most cases, the possibility of water mass intrusions and/or large overturns could not be eliminated, only

XBT DROP 138 28 39.1N 112 39.8W 24 NOV 84 1954 MST

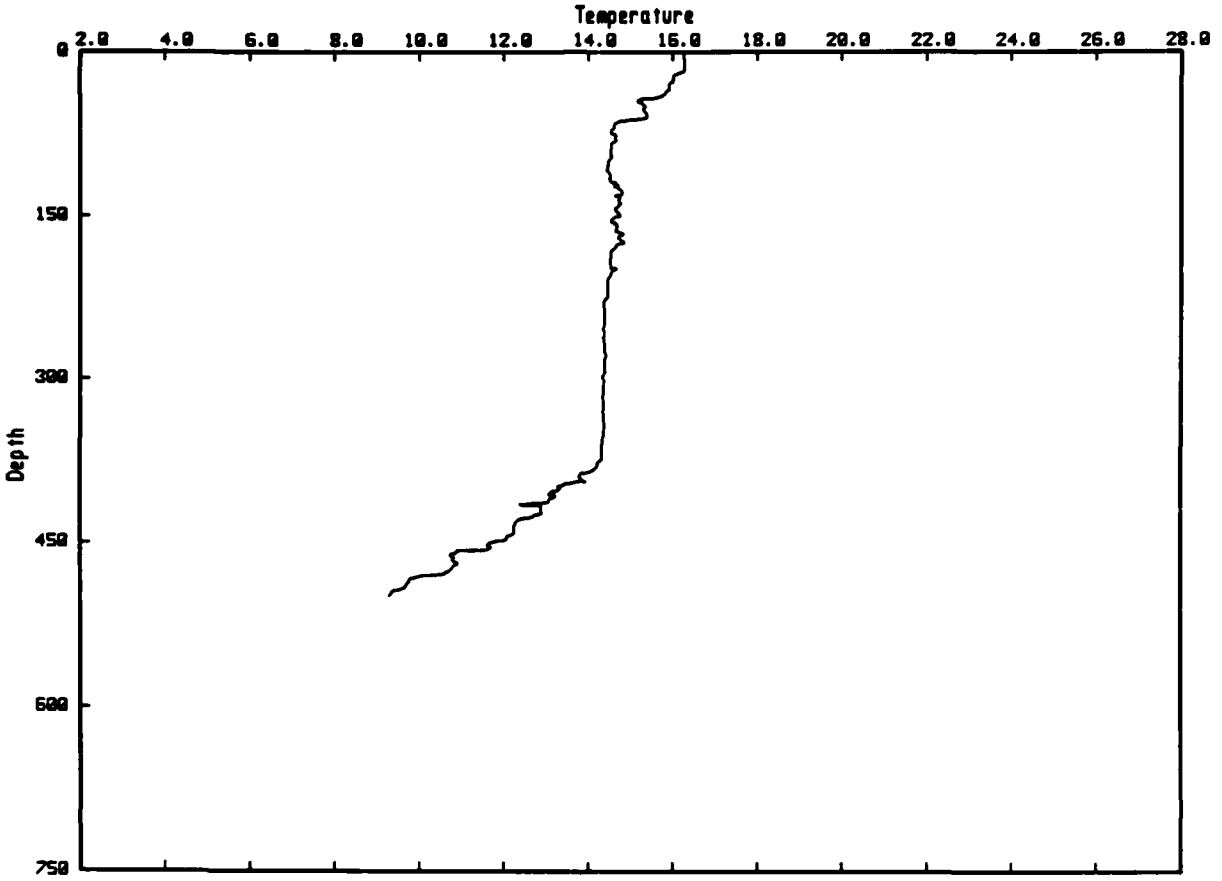


XBT DROP 138 T-7 RADAR: none GULF COORDS: -24.4 244.6
JDAY 330 254Z DEPTH 468m/468m SST 16.25 2M TEMPS: SAIL 16.30 XBT 16.13
GULF OF CALIFORNIA: SILL REGION, DOWNCAST OF CTD STATION PC6114

Z	TEMP	Z	TEMP	Z	TEMP
10	16.2	200	14.6	390	12.4
20	16.1	210	15.0	399	12.2
30	16.1	220	15.1	410	12.1
40	16.0	230	15.1	420	11.6
50	15.9	239	15.2	430	11.0
60	15.9	250	15.1	440	10.9
70	15.7	260	15.1	450	10.1
80	14.8	270	14.8	460	9.2
90	14.8	280	14.4	468	9.2
100	14.6	290	14.3		
110	14.5	299	14.1		
119	14.5	309	14.1		
130	14.5	320	14.1		
140	14.4	330	13.7		
150	14.6	340	13.4		
160	14.6	350	13.1		
169	14.6	359	12.8		
179	14.6	370	12.7		
190	14.6	379	12.5		

Figure 2. XBT Drop 138

XBT DROP 139 28 37.8N 112 39.2W 24 NOV 84 1957 MST

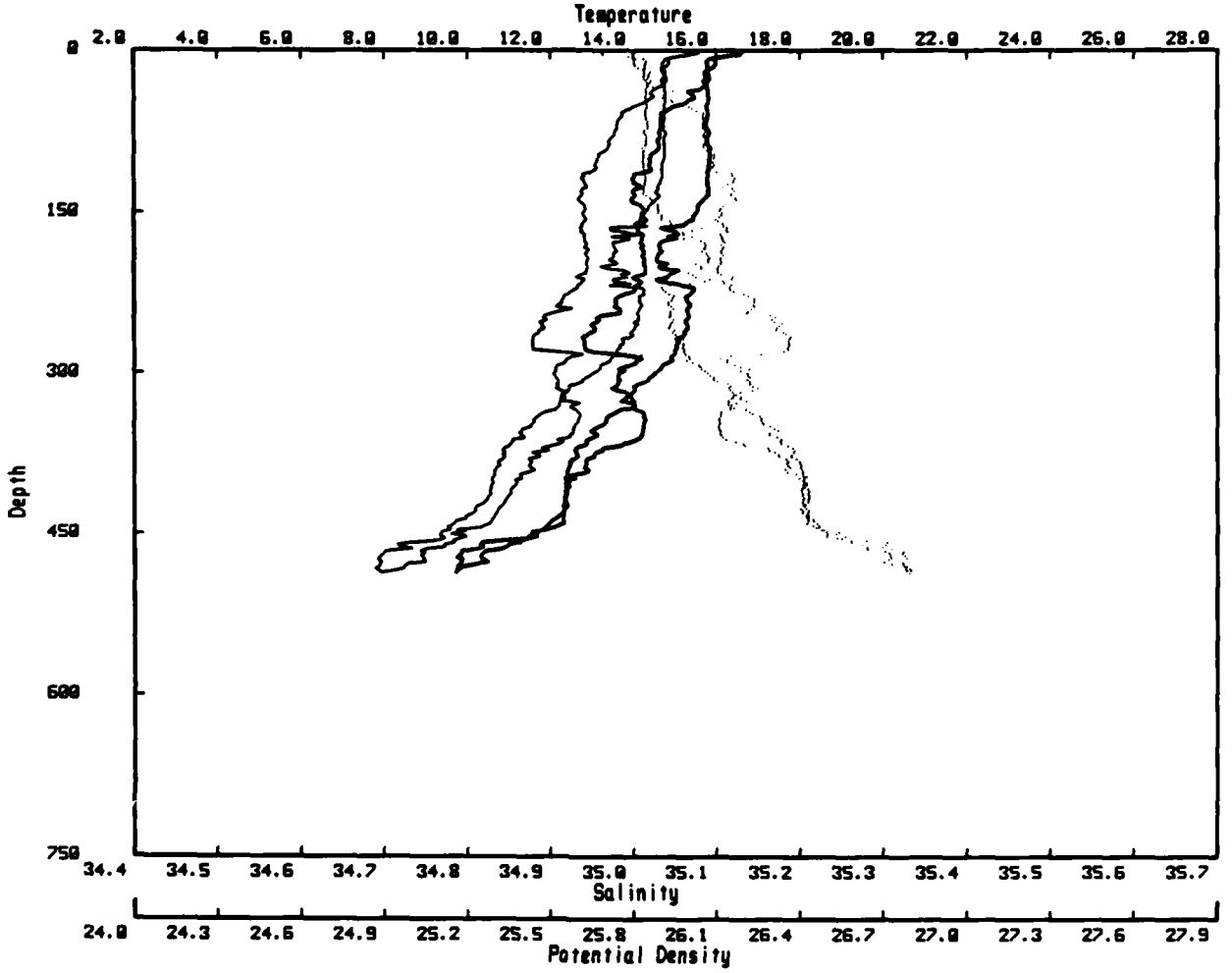


XBT DROP 139 T-7 RADAR: none GULF COORDS: -25.0 242.0
JDAY 330 257Z DEPTH 498m/498m SST 16.24 2M TEMPS: SAIL 16.32 XBT 16.26
GULF OF CALIFORNIA: SILL REGION, UPCAST OF CTD STATION PC6114

Z	TEMP	Z	TEMP	Z	TEMP
10	16.3	200	14.6	390	13.8
20	16.1	211	14.5	400	13.3
31	15.9	220	14.5	410	13.1
40	15.8	230	14.4	420	12.9
50	15.4	240	14.4	430	12.3
60	15.4	250	14.4	440	12.2
70	14.6	260	14.4	450	11.7
80	14.7	270	14.4	460	10.8
90	14.5	280	14.4	470	10.8
100	14.5	290	14.4	480	10.0
110	14.5	300	14.4	490	9.7
120	14.6	310	14.4	498	9.3
130	14.8	320	14.4		
140	14.7	330	14.4		
150	14.8	340	14.4		
160	14.7	351	14.4		
170	14.7	360	14.3		
180	14.6	369	14.3		
190	14.5	380	14.2		

Figure 3. XBT Drop 139

STATION PC6114 : 28 37.6 N 112 38.6 W 24/11/84 245Z 486/ 365m



Day: 330.10 SST: 16.1 Tdry: 99.9 Twet: 99.9 Wspd: 8.8 CTD #: 3
CAP1-16 REREAD ON NH 7 MAR 85 BWW
22 JAN 86 ANC CH:LTMIN,LGMIN,CW. POS:CRAD

PR	TE	SA	SGTH	PR	TE	SA	SGTH
2.0	16.600	35.079	25.688	90.0	15.855	35.038	25.831
10.0	15.771	35.037	25.847	100.0	15.831	35.037	25.836
20.0	15.792	35.035	25.841	120.0	15.783	35.033	25.845
30.0	15.770	35.038	25.848	140.0	15.619	35.023	25.875
40.0	15.780	35.038	25.846	160.0	15.263	35.001	25.938
50.0	15.769	35.037	25.849	180.0	14.616	34.976	26.061
60.0	15.789	35.037	25.844	200.0	14.629	34.960	26.047
70.0	15.757	35.037	25.852	300.0	14.505	34.951	26.070
80.0	15.771	35.037	25.849	400.0	12.388	34.830	26.411

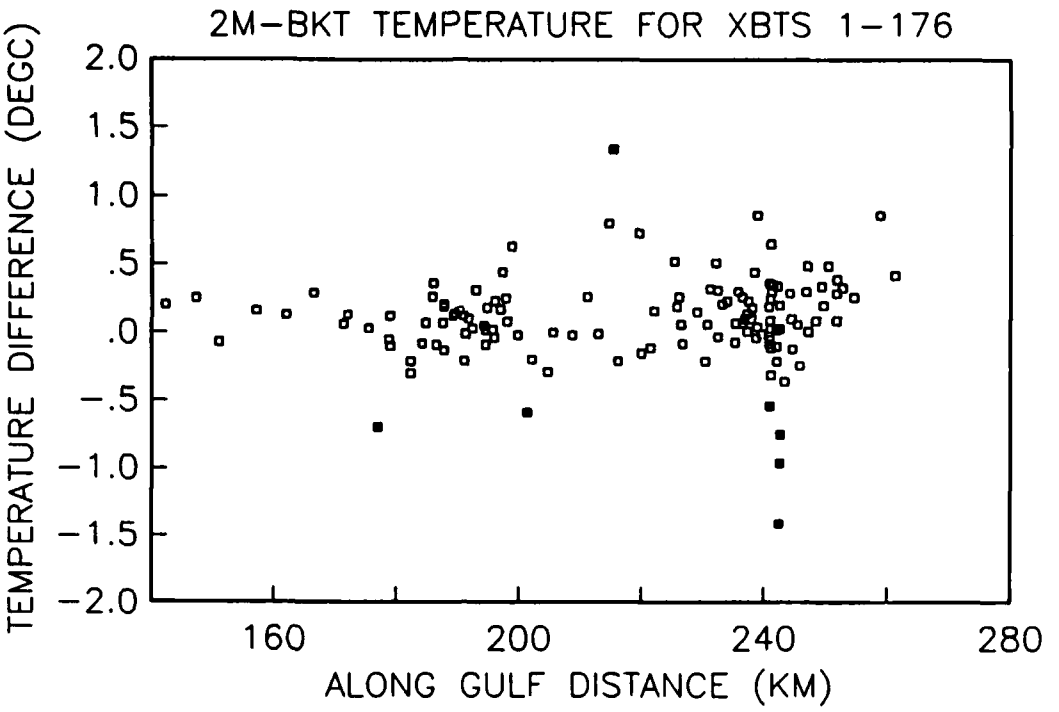
Figure 4. CTD Station PC6114

those stations with high frequency noise or atypical temperatures were deleted from the report.

Calibration of near surface temperatures were made for all XBT drops. Sea surface temperature measurements were made using a bucket thermometer and subsurface measurements were made by diverting water from the ship's uncontaminated sea water line through a chamber containing a platinum resistance thermometer (PRT). These 2-meter temperatures were recorded continuously on a SAIL system (Serial ASCII Instrumentation Loop). Comparison of the SAIL 2-meter temperatures to the XBT 2-meter temperatures must take into account possible warming affects while water is pumped the full extent of the ship to the sensor location as well as the lag in arrival time. In areas of large horizontal temperature gradients there will be discrepancies between XBT derived SST's and the calibration SSTs. Both temperatures, however, provide an approximate measure of the correct temperature to expect for the XBT surface temperature.

There are two sources of error in obtaining an accurate measure of sea surface temperatures with XBTs: 1) the pen slew rate, and 2) thermal adjustment of the probe's thermistor. With a thermistor time constant of 110 m/sec and an average fall rate of 6.3 m/sec, XBT derived temperatures would not be expected to accurately represent in situ temperatures until after 0.6 secs or 3-4 m below the surface. The biggest source of error, however, when using an analog recorder is the delay in pen response to changes in temperature. At the start of a drop, the pen is located at the calibration temperature position at 16.7 ° C. If the surface temperatures are warm, as they are over most of the Gulf of California during spring and summer, it will take some time for the pen to arrive at the appropriate chart position corresponding to the SST. This effect can occur anywhere in the water column where there are strong vertical temperature gradients but is most pronounced at the surface.

Differences between XBT-derived 2-meter temperatures and the bucket (BKT) or SAIL temperatures for Pichicuco VI and VII are plotted in Figures 5 and 6. Outlying points (dark-



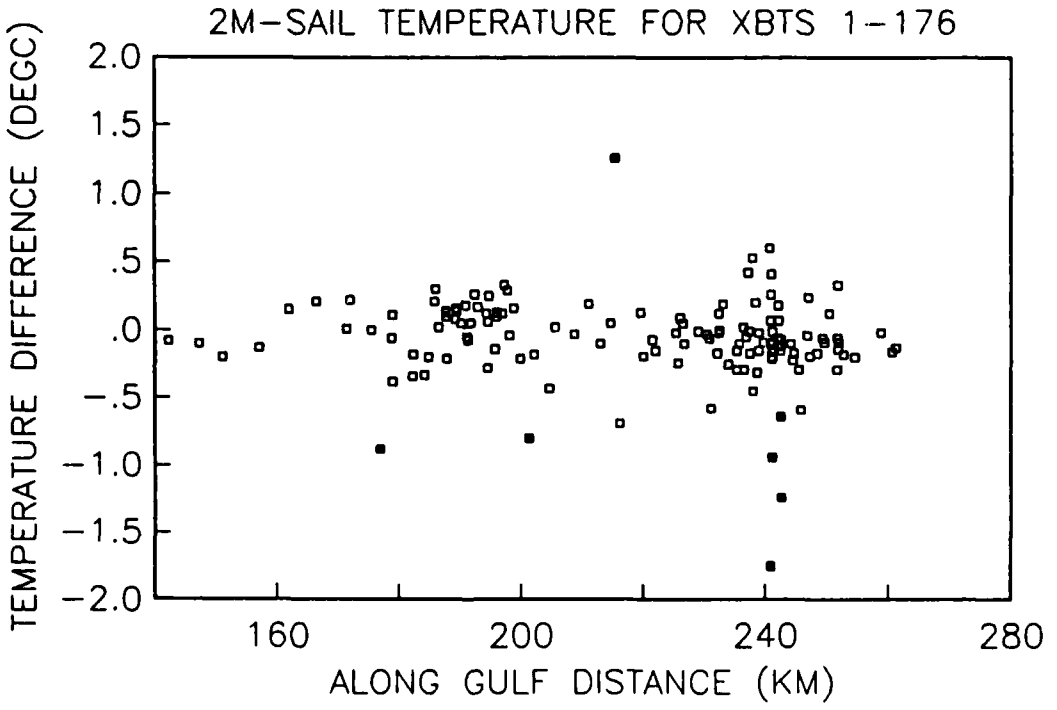
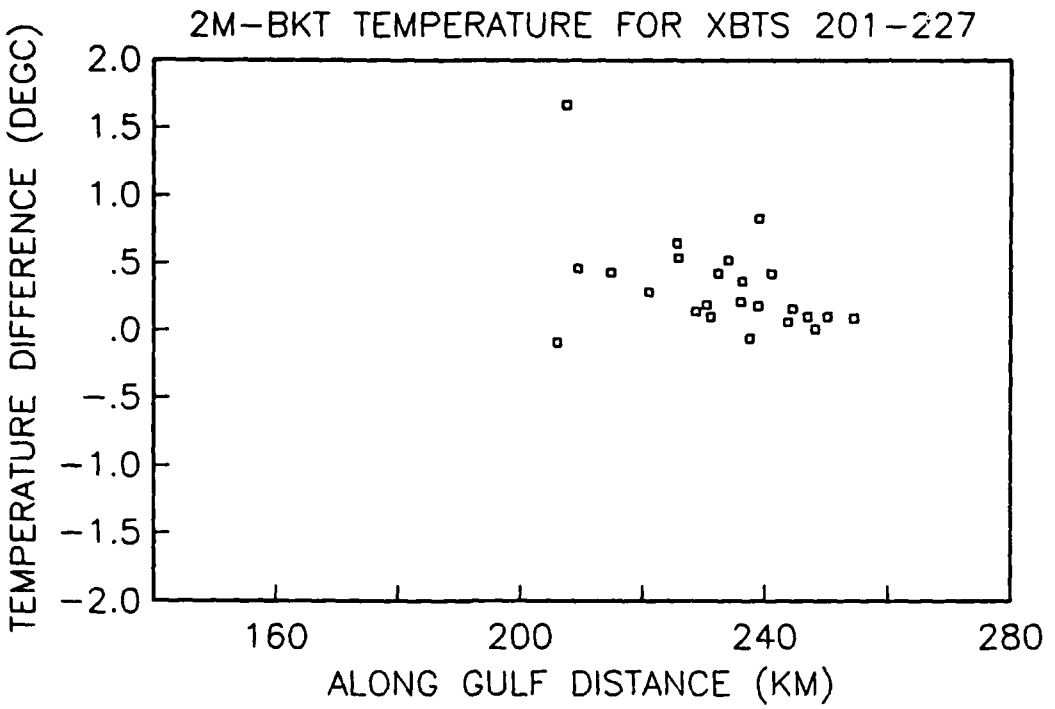


Figure 5. Temperature Differences: XBT versus Bucket and SAIL Calibration Temperatures for November 1984.



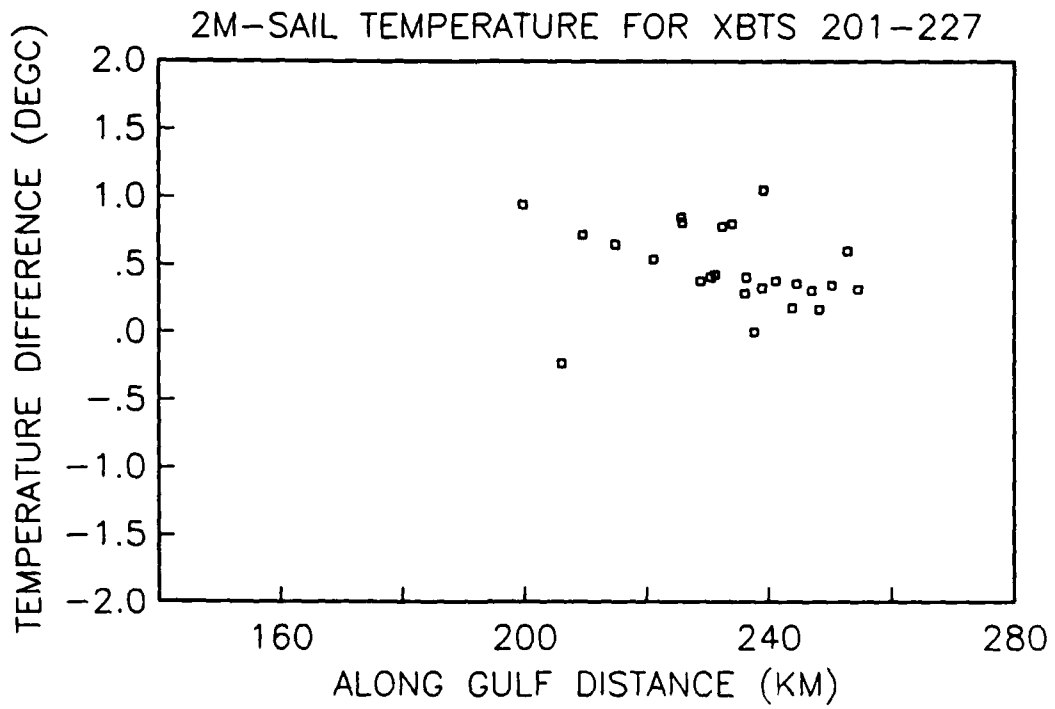


Figure 6. Temperature Differences: XBT versus Bucket and SAIL Calibration Temperatures for March 1985.

ened) present in both plots are attributable to errors in the XBT surface temperature and were deleted from the statistical analysis. Statistics of the temperature differences are presented in Table 1. Errors for Pichicuco VI are within the expected range of $\pm$ 0.2 °C, however, errors for Pichicuco VII are slightly larger than expected with a considerable offset in mean temperatures. Significant offsets can occur if the digitized data are sampled too soon after the start of the drop. Approximately 0.6 seconds are required for the thermistor probe to come into equilibrium with in situ temperatures. This time interval corresponds to a depth of 4 meters. XBT-derived temperatures are in better agreement with the calibration temperatures if these 4-meter temperatures are used in the statistical comparison (Table 1).

The bottom depth for each drop was measured by the ship's acoustic Precision Depth Recorder (PDR). Comparisons of PDR- versus XBT-derived bottom depths show differences on the order of 0-40 m. Changes in fall-rate from that predicted by the depth equation can lead to depth errors of up to 2% of the depth (Stegan et al., 1975). Discrepancies greater than the expected error are most likely due to the presence of highly variable bathymetry. In areas of steep topography, an XBT may hit bottom at a different location than that predicted from the PDR sounding. In areas of strong currents, such as near the sills, this problem is amplified.

REPORT FORMAT

The following temperature profiles are presented according to cruise and transect location. The first section includes stations taken during November 1984 (Pichicuco VI). Within this section the data are divided according to geographical location: Guaymas Basin, Ballenas Channel, and San Esteban Sill. The various transects made in each of these areas are presented separately, and are preceded by a map of the station positions. This map is an enlargement of the area marked in Figure 1. Tidal phase information for each of these regions is presented at the beginning of each geographical subsection. Bottom pressure sensors deployed during the Pichicuco field experiment provided the first tidal data for this area of the gulf. Hourly

Table 1. Statistics for Calibration Temperature Differences (° C).

Pichicuco VI

ΔT	$\overline{X}$	σ
XBT2-BKT	.1	.2
XBT2-SAIL	.0	.2

Pichicuco VII

ΔT	$\overline{X}$	σ
XBT2-BKT	.3	.2
XBT2-SAIL	.4	.3
XBT4-BKT	-.1	.1
XBT4-SAIL	.1	.2

XBT2 = XBT-derived 2-meter temperature
XBT4 = XBT-derived 4-meter temperature
BKT = Bucket thermometer SST
SAIL = SAIL System PRT 2-meter temperature

averages of bottom pressure (mbars) for San Francisquito (Northern Guaymas Basin and Ballenas Channel), and San Esteban are plotted for each period during which XBT data were collected (Merrifield et al., 1986). Additional tidal information for the northern gulf is given in Appendix C. The second section of the report contains data for March 1985 (Pichicuco VII), and is organized in the same manner as Section 1.

Each data page contains a plot of the XBT trace plus a subsample of the data at 10 meter intervals. Across the top of each page are the XBT drop number, latitude and longitude, and local date and time (Mountain Standard Time, MST). Below each plot additional station information is listed as follows: 1) XBT drop number, 2) XBT probe type, 3) radar point*, range and bearing (if available), 4) distance in km from 27 ° N, 111 ° W perpendicular to and parallel to Gulf axis (324 ° T), 5) Julian day, 6) GMT, 7) PDR bottom depth/XBT depth of failure, 8) bucket thermometer SST (° C), 9) SAIL SST (° C), 10) XBT 2M temperature (° C), and 11) station header: location, name and tidal phase.

The XBT stations presented in this report are listed in Table 2. A number of drops failed due to wire breakage, fouling on the ship, or some other electrical problem. The relatively high failure rate is a result of using XBT probes which had been stored for some time. XBT stations were numbered consecutively, so failed drops will be evident as a missing number in the sequence. Missing stations are listed in Table 3, along with stations which are missing data as a result of some failure at depth. The station names, i.e. MX0-3, listed in the header below each plot are in numerical order, corresponding only to successful drops within each transect.

*SE = SW tip of Isla San Esteban
WL = Punta Willard on Isla Tiburon
PSWL = Point South of Punta Willard

Table 2. XBT Station List

PICHICUCO VI

Station	Lat	Long	Date	MST	Depth	Across Gulf	Along Gulf
XBT001	28 40.2N	112 40.6W	15 NOV 84	1333L	550m	-24.20km	247.00km
XBT002	27 43.5N	112 2.7W	20 NOV 84	511L	1500m	-36.10km	125.80km
XBT003	27 44.7N	112 5.1W	20 NOV 84	531L	1500m	-38.00km	129.90km
XBT004	27 45.7N	112 7.6W	20 NOV 84	545L	1500m	-39.40km	133.20km
XBT005	27 47.4N	112 9.7W	20 NOV 84	600L	1380m	-41.10km	138.40km
XBT006	27 48.4N	112 12.2W	20 NOV 84	615L	1214m	-43.40km	142.30km
XBT007	27 49.9N	112 15.1W	20 NOV 84	630L	1260m	-45.60km	147.30km
XBT008	27 50.9N	112 17.5W	20 NOV 84	645L	1158m	-47.70km	151.10km
XBT009	27 52.5N	112 21.2W	20 NOV 84	706L	1092m	-50.80km	157.10km
XBT010	27 54.8N	112 22.7W	20 NOV 84	720L	809m	-50.30km	162.00km
XBT011	27 56.9N	112 24.1W	20 NOV 84	735L	982m	-49.90km	166.50km
XBT012	27 59.2N	112 25.6W	20 NOV 84	750L	859m	-49.30km	171.40km
XBT015	28 2.8N	112 28.6W	20 NOV 84	813L	982m	-48.60km	179.00km
XBT017	28 6.2N	112 30.6W	20 NOV 84	834L	825m	-47.50km	186.00km
XBT019	28 6.9N	112 29.4W	20 NOV 84	935L	805m	-45.90km	186.50km
XBT020	28 7.8N	112 29.1W	20 NOV 84	943L	768m	-44.50km	187.60km
XBT021	28 9.3N	112 28.6W	20 NOV 84	951L	642m	-42.20km	189.30km
XBT022	28 10.6N	112 28.2W	20 NOV 84	959L	568m	-40.30km	190.90km
XBT023	28 11.9N	112 27.8W	20 NOV 84	1007L	459m	-38.30km	192.40km
XBT024	28 13.6N	112 27.4W	20 NOV 84	1015L	551m	-35.90km	194.60km
XBT025	28 14.8N	112 27.0W	20 NOV 84	1023L	720m	-34.10km	196.00km
XBT026	28 16.3N	112 26.6W	20 NOV 84	1031L	840m	-31.90km	197.80km
XBT027	28 16.9N	112 25.1W	20 NOV 84	1224L	982m	-29.20km	197.30km
XBT028	28 15.9N	112 25.3W	20 NOV 84	1232L	810m	-30.60km	196.00km
XBT029	28 14.8N	112 25.7W	20 NOV 84	1246L	648m	-32.30km	194.70km
XBT030	28 13.2N	112 26.3W	20 NOV 84	1248L	514m	-34.90km	192.90km
XBT031	28 11.7N	112 26.9W	20 NOV 84	1256L	660m	-37.30km	191.30km
XBT032	28 10.2N	112 27.4W	20 NOV 84	1304L	796m	-39.60km	189.50km
XBT033	28 8.6N	112 28.0W	20 NOV 84	1312L	885m	-42.20km	187.70km
XBT034	28 7.1N	112 28.4W	20 NOV 84	1320L	910m	-44.40km	185.80km
XBT035	28 9.4N	112 26.8W	20 NOV 84	1525L	909m	-39.70km	187.70km
XBT036	28 10.6N	112 26.5W	20 NOV 84	1533L	892m	-38.00km	189.20km
XBT037	28 11.3N	112 26.4W	20 NOV 84	1537L	804m	-37.10km	190.20km
XBT038	28 12.6N	112 26.1W	20 NOV 84	1545L	694m	-35.30km	191.80km
XBT040	28 14.6N	112 25.6W	20 NOV 84	1557L	520m	-32.40km	194.30km
XBT042	28 15.4N	112 25.8W	20 NOV 84	1608L	579m	-31.80km	195.70km
XBT043	28 16.4N	112 25.5W	20 NOV 84	1616L	767m	-30.30km	196.90km
XBT044	28 18.0N	112 25.0W	20 NOV 84	1624L	900m	-27.90km	198.80km
XBT045	28 19.0N	112 24.5W	20 NOV 84	1629L	1010m	-26.10km	199.80km
XBT046	28 23.0N	112 32.0W	21 NOV 84	818L	787m	-31.70km	213.00km
XBT047	28 21.5N	112 29.8W	21 NOV 84	830L	874m	-30.40km	208.70km
XBT048	28 20.2N	112 28.6W	21 NOV 84	842L	904m	-30.30km	205.60km
XBT049	28 18.9N	112 27.0W	21 NOV 84	852L	932m	-29.60km	202.10km
XBT050	28 17.2N	112 25.5W	21 NOV 84	906L	869m	-29.40km	198.10km
XBT053	28 15.0N	112 21.6W	21 NOV 84	926L	823m	-26.70km	191.10km
XBT054	28 13.7N	112 20.2W	21 NOV 84	938L	827m	-26.20km	187.80km
XBT056	28 11.5N	112 17.9W	21 NOV 84	958L	799m	-25.60km	182.30km
XBT057	28 10.1N	112 16.5W	21 NOV 84	1011L	752m	-25.30km	178.80km
XBT058	28 8.7N	112 15.2W	21 NOV 84	1023L	741m	-25.10km	175.50km
XBT059	28 7.1N	112 14.0W	21 NOV 84	1035L	767m	-25.30km	172.00km
XBT060	28 10.9N	112 13.2W	21 NOV 84	1446L	860m	-20.00km	176.90km
XBT062	28 13.9N	112 16.8W	21 NOV 84	1507L	915m	-21.50km	184.80km
XBT063	28 11.4N	112 18.1W	21 NOV 84	1522L	860m	-26.00km	182.30km
XBT065	28 8.8N	112 18.6W	21 NOV 84	1541L	433m	-29.50km	178.90km
XBT066	28 10.3N	112 21.7W	21 NOV 84	1556L	590m	-32.00km	184.20km
XBT067	28 12.3N	112 24.3W	21 NOV 84	1611L	723m	-33.20km	189.60km
XBT068	28 14.2N	112 26.5W	21 NOV 84	1626L	850m	-34.10km	194.60km
XBT069	28 17.3N	112 28.6W	21 NOV 84	1642L	1005m	-33.40km	201.30km
XBT070	28 18.5N	112 30.3W	21 NOV 84	1653L	950m	-34.40km	204.70km
XBT072	28 20.5N	112 33.9W	21 NOV 84	1710L	810m	-37.00km	211.10km
XBT073	28 22.8N	112 34.8W	21 NOV 84	1725L	623m	-35.60km	215.40km
XBT074	28 24.7N	112 36.6W	21 NOV 84	1740L	429m	-35.90km	220.00km
XBT075	28 25.9N	112 36.3W	21 NOV 84	1754L	281m	-34.20km	221.50km
XBT077	28 30.0N	112 41.3W	22 NOV 84	2318L	328m	-36.40km	232.40km
XBT079	28 21.8N	112 35.6W	23 NOV 84	416L	342m	-37.80km	214.70km
XBT080	28 22.0N	112 36.8W	23 NOV 84	427L	224m	-39.20km	216.20km

PICHICUCO VI, Contd.

Station	Lat	Long	Date	MST	Depth	Across Gulf	Along Gulf
XBT081	28 23.5N	112 38.0W	23 NOV 84	439L	200m	-39.10km	219.60km
XBT082	28 24.0N	112 39.8W	23 NOV 84	451L	165m	-41.00km	222.00km
XBT083	28 25.4N	112 41.1W	23 NOV 84	503L	208m	-41.10km	225.40km
XBT084	28 26.9N	112 42.5W	23 NOV 84	515L	400m	-41.30km	229.00km
XBT086	28 28.0N	112 44.4W	23 NOV 84	532L	654m	-42.70km	232.40km
XBT087	28 29.5N	112 45.5W	23 NOV 84	544L	936m	-42.50km	235.70km
XBT089	28 31.7N	112 47.5W	23 NOV 84	600L	969m	-42.70km	240.90km
XBT090	28 33.4N	112 48.1W	23 NOV 84	615L	929m	-41.60km	244.10km
XBT091	28 34.1N	112 49.9W	23 NOV 84	630L	812m	-43.20km	246.80km
XBT093	28 39.4N	112 56.6W	23 NOV 84	700L	1300m	-46.30km	261.20km
XBT094	28 38.5N	112 55.5W	23 NOV 84	903L	1265m	-45.80km	258.80km
XBT095	28 33.0N	112 55.3W	23 NOV 84	1905L	453m	-51.60km	250.40km
XBT097	28 35.9N	112 52.5W	23 NOV 84	1930L	1223m	-44.70km	252.00km
XBT098	28 34.6N	112 51.7W	23 NOV 84	1942L	965m	-45.10km	249.30km
XBT099	28 33.9N	112 50.5W	23 NOV 84	1954L	914m	-44.30km	247.10km
XBT101	28 31.5N	112 48.0W	23 NOV 84	2010L	969m	-43.60km	241.10km
XBT102	28 30.0N	112 48.0W	23 NOV 84	2022L	351m	-45.20km	238.90km
XBT103	28 28.0N	112 49.5W	23 NOV 84	2034L	294m	-49.40km	237.40km
XBT106	28 31.5N	112 44.8W	23 NOV 84	2107L	980m	-39.30km	238.00km
XBT107	28 32.7N	112 42.1W	23 NOV 84	2119L	244m	-34.40km	237.20km
XBT108	28 33.8N	112 41.6W	23 NOV 84	2131L	259m	-32.60km	238.40km
XBT109	28 31.6N	112 39.5W	23 NOV 84	2150L	247m	-32.20km	233.10km
XBT111	28 28.6N	112 42.1W	23 NOV 84	2214L	634m	-38.90km	231.10km
XBT112	28 27.0N	112 43.8W	23 NOV 84	2226L	231m	-43.00km	230.40km
XBT113	28 26.0N	112 45.8W	23 NOV 84	2238L	250m	-46.70km	230.80km
XBT114	28 24.0N	112 44.0W	23 NOV 84	2306L	224m	-46.50km	226.10km
XBT115	28 25.1N	112 41.9W	23 NOV 84	2318L	111m	-42.50km	225.70km
XBT116	28 27.0N	112 40.0W	23 NOV 84	2330L	454m	-37.90km	226.70km
XBT118	28 29.1N	112 36.5W	23 NOV 84	2354L	424m	-31.00km	226.50km
XBT120	28 34.2N	112 34.4W	24 NOV 84	339L	573m	-22.60km	232.10km
XBT121	28 34.6N	112 34.1W	24 NOV 84	353L	542m	-21.80km	232.40km
XBT122	28 35.2N	112 34.8W	24 NOV 84	405L	558m	-22.00km	233.90km
XBT123	28 36.0N	112 35.1W	24 NOV 84	412L	558m	-21.50km	235.40km
XBT124	28 36.2N	112 35.8W	24 NOV 84	421L	555m	-22.20km	236.40km
XBT125	28 36.1N	112 36.2W	24 NOV 84	427L	511m	-22.90km	236.60km
XBT126	28 36.4N	112 36.4W	24 NOV 84	433L	503m	-22.80km	237.30km
XBT127	28 36.5N	112 36.9W	24 NOV 84	439L	493m	-23.40km	237.90km
XBT128	28 36.9N	112 37.1W	24 NOV 84	445L	488m	-23.20km	238.70km
XBT129	28 37.2N	112 37.6W	24 NOV 84	457L	298m	-23.50km	239.60km
XBT130	28 38.5N	112 38.6W	24 NOV 84	514L	145m	-23.40km	242.50km
XBT131	28 40.0N	112 39.4W	24 NOV 84	532L	345m	-22.80km	245.50km
XBT132	28 41.4N	112 40.2W	24 NOV 84	544L	390m	-22.40km	248.40km
XBT133	28 42.9N	112 41.4W	24 NOV 84	556L	452m	-22.30km	251.80km
XBT134	28 43.3N	112 41.8W	24 NOV 84	602L	435m	-22.40km	252.70km
XBT135	28 44.0N	112 42.5W	24 NOV 84	614L	408m	-22.60km	254.50km
XBT137	28 34.1N	112 43.6W	24 NOV 84	1508L	611m	-34.90km	240.80km
XBT138	28 39.1N	112 39.8W	24 NOV 84	1954L	468m	-24.40km	244.60km
XBT139	28 37.8N	112 39.2W	24 NOV 84	1957L	498m	-25.00km	242.00km
XBT140	28 35.7N	112 42.6W	25 NOV 84	942L	428m	-31.80km	242.20km
XBT141	28 36.1N	112 42.4W	25 NOV 84	948L	488m	-31.10km	242.60km
XBT142	28 36.5N	112 41.8W	25 NOV 84	952L	567m	-29.90km	242.60km
XBT143	28 37.1N	112 40.8W	25 NOV 84	958L	538m	-27.90km	242.50km
XBT144	28 37.3N	112 40.3W	25 NOV 84	1002L	481m	-27.00km	242.40km
XBT145	28 37.8N	112 39.3W	25 NOV 84	1008L	221m	-25.10km	242.10km
XBT146	28 38.0N	112 38.2W	25 NOV 84	1014L	120m	-23.50km	241.40km
XBT147	28 38.1N	112 37.8W	25 NOV 84	1017L	111m	-22.80km	241.10km
XBT148	28 43.1N	112 41.1W	28 NOV 84	1335L	419m	-21.70km	251.80km
XBT149	28 42.2N	112 40.2W	28 NOV 84	1341L	382m	-21.50km	249.60km
XBT150	28 41.0N	112 39.6W	28 NOV 84	1347L	348m	-22.00km	247.20km
XBT151	28 40.3N	112 39.2W	28 NOV 84	1351L	317m	-22.20km	245.80km
XBT152	28 39.5N	112 39.0W	28 NOV 84	1355L	227m	-22.90km	244.40km
XBT153	28 39.0N	112 38.6W	28 NOV 84	1359L	115m	-22.90km	243.30km
XBT154	28 38.4N	112 38.3W	28 NOV 84	1403L	111m	-23.10km	242.10km
XBT155	28 37.5N	112 37.6W	28 NOV 84	1408L	219m	-23.20km	240.10km
XBT156	28 37.0N	112 37.2W	28 NOV 84	1413L	319m	-23.20km	238.90km
XBT157	28 36.2N	112 36.2W	28 NOV 84	1418L	444m	-22.80km	236.80km

PICHICUCO VI, Contd.

Station	Lat	Long	Date	MST	Depth	Across Gulf	Along Gulf
XBT158	28 35.6N	112 35.6W	28 NOV 84	1423L	539m	-22.60km	235.30km
XBT159	28 35.1N	112 34.9W	28 NOV 84	1428L	555m	-22.30km	233.90km
XBT160	28 34.4N	112 34.6W	28 NOV 84	1433L	545m	-22.60km	232.50km
XBT161	28 34.6N	112 43.2W	29 NOV 84	1814L	120m	-33.80km	241.10km
XBT162	28 35.0N	112 42.5W	29 NOV 84	1822L	474m	-32.40km	241.00km
XBT163	28 35.5N	112 41.9W	29 NOV 84	1828L	487m	-31.10km	241.20km
XBT164	28 35.7N	112 41.2W	29 NOV 84	1834L	557m	-30.00km	240.80km
XBT165	28 36.3N	112 40.4W	29 NOV 84	1840L	568m	-28.20km	241.00km
XBT166	28 37.0N	112 39.8W	29 NOV 84	1846L	520m	-26.70km	241.40km
XBT167	28 37.2N	112 39.1W	29 NOV 84	1851L	407m	-25.50km	241.10km
XBT168	28 37.4N	112 38.4W	29 NOV 84	1855L	284m	-24.40km	240.70km
XBT169	28 37.8N	112 38.1W	29 NOV 84	1900L	141m	-23.50km	241.00km
XBT170	28 38.3N	112 37.2W	29 NOV 84	1905L	113m	-21.80km	240.90km
XBT171	28 38.6N	112 36.6W	29 NOV 84	1911L	86m	-20.70km	240.70km
XBT172	28 46.0N	112 36.7W	30 NOV 84	103L	214m	-12.70km	251.90km
XBT173	28 47.0N	112 35.0W	30 NOV 84	114L	497m	-9.30km	251.70km
XBT175	28 48.6N	112 32.5W	30 NOV 84	130L	506m	-4.30km	251.70km
XBT176	28 50.4N	112 39.0W	30 NOV 84	210L	575m	-10.90km	260.60km

PICHICUCO VII

Station	Lat	Long	Date	MST	Depth	Across Gulf	Along Gulf
XBT201	28 17.5N	112 26.7W	9 MAR 85	652L	961m	-30.70km	199.70km
XBT202	28 20.6N	112 30.1W	9 MAR 85	717L	760m	-31.80km	207.60km
XBT203	28 28.3N	112 36.9W	9 MAR 85	806L	330m	-32.40km	225.70km
XBT204	28 31.0N	112 38.5W	9 MAR 85	828L	282m	-31.50km	231.20km
XBT205	28 34.2N	112 38.6W	9 MAR 85	849L	612m	-28.20km	236.10km
XBT206	28 36.0N	112 38.7W	9 MAR 85	901L	567m	-26.30km	238.90km
XBT208	28 44.3N	112 42.1W	9 MAR 85	2105L	410m	-21.70km	254.50km
XBT209	28 43.5N	112 41.5W	9 MAR 85	2119L	449m	-21.80km	252.80km
XBT210	28 42.4N	112 40.6W	9 MAR 85	2125L	456m	-21.80km	250.20km
XBT211	28 41.4N	112 40.0W	9 MAR 85	2132L	394m	-22.10km	248.20km
XBT212	28 40.6N	112 40.0W	9 MAR 85	2138L	396m	-23.00km	247.00km
XBT213	28 39.6N	112 39.0W	9 MAR 85	2145L	220m	-22.80km	244.50km
XBT214	28 38.8N	112 39.5W	9 MAR 85	2150L	170m	-24.30km	243.80km
XBT215	28 37.6N	112 38.5W	9 MAR 85	2159L	300m	-24.30km	241.10km
XBT216	28 36.6N	112 38.0W	9 MAR 85	2204L	390m	-24.70km	239.10km
XBT217	28 35.9N	112 37.5W	9 MAR 85	2210L	539m	-24.80km	237.60km
XBT218	28 35.4N	112 37.0W	9 MAR 85	2216L	519m	-24.70km	236.30km
XBT219	28 34.5N	112 36.0W	9 MAR 85	2222L	485m	-24.40km	234.00km
XBT220	28 33.7N	112 35.5W	9 MAR 85	2228L	489m	-24.60km	232.40km
XBT221	28 33.0N	112 34.6W	9 MAR 85	2234L	520m	-24.20km	230.50km
XBT222	28 32.3N	112 34.0W	9 MAR 85	2240L	574m	-24.10km	228.80km
XBT223	28 31.0N	112 33.0W	9 MAR 85	2248L	627m	-24.20km	225.90km
XBT224	28 29.0N	112 31.1W	9 MAR 85	2306L	828m	-23.90km	221.10km
XBT225	28 26.4N	112 28.7W	9 MAR 85	2324L	970m	-23.60km	214.90km
XBT226	28 24.0N	112 26.8W	9 MAR 85	2339L	653m	-23.70km	209.50km
XBT227	28 22.6N	112 25.4W	9 MAR 85	2354L	900m	-23.40km	206.10km

Table 3. Missing and Incomplete XBT Stations

Missing	*Incomplete*
XBT013	XBT001
XBT014	XBT036
XBT016	XBT044
XBT018	XBT048
XBT039	XBT058
XBT041	XBT065
XBT051	XBT093
XBT052	XBT094
XBT055	XBT106
XBT061	
XBT064	
XBT071	
XBT076	
XBT078	
XBT085	
XBT088	
XBT092	
XBT096	
XBT100	
XBT104	
XBT105	
XBT110	
XBT117	
XBT119	
XBT136	
XBT174	
XBT207	
XBT228	

Pichicuco VI

November 1984

Guaymas Basin

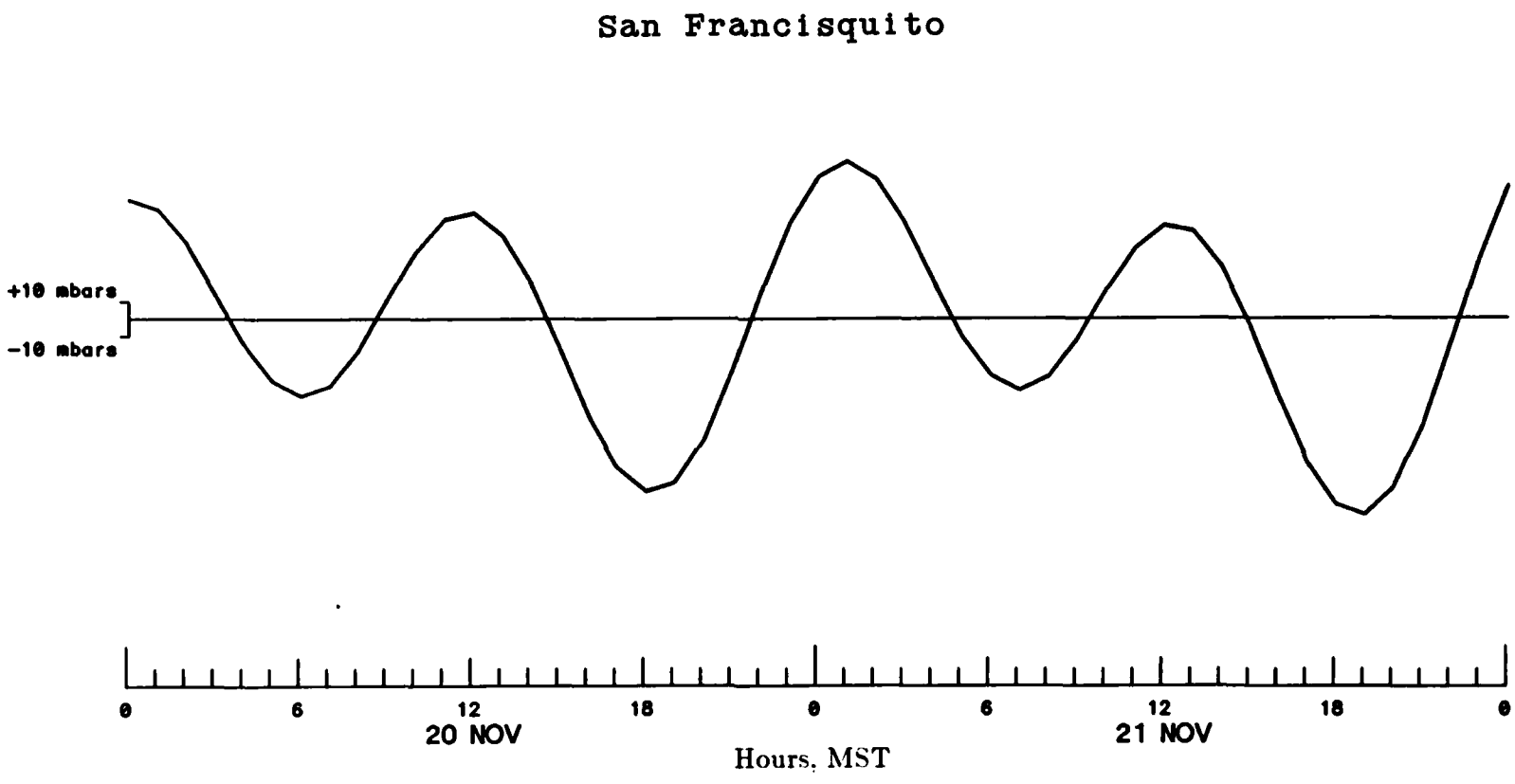


Figure 7. Bottom Pressure at San Francisquito Bay. 20-21 November 1984.

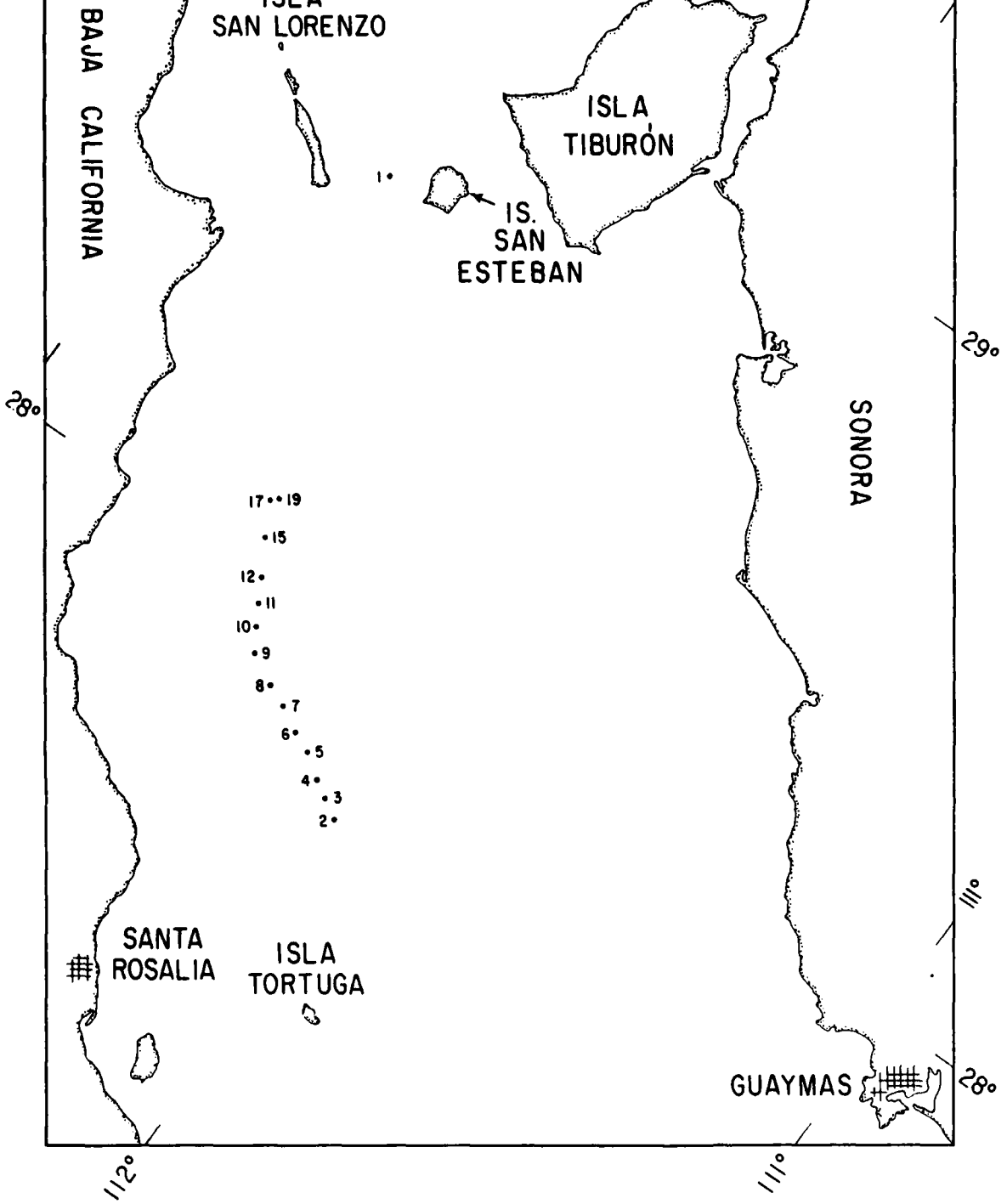
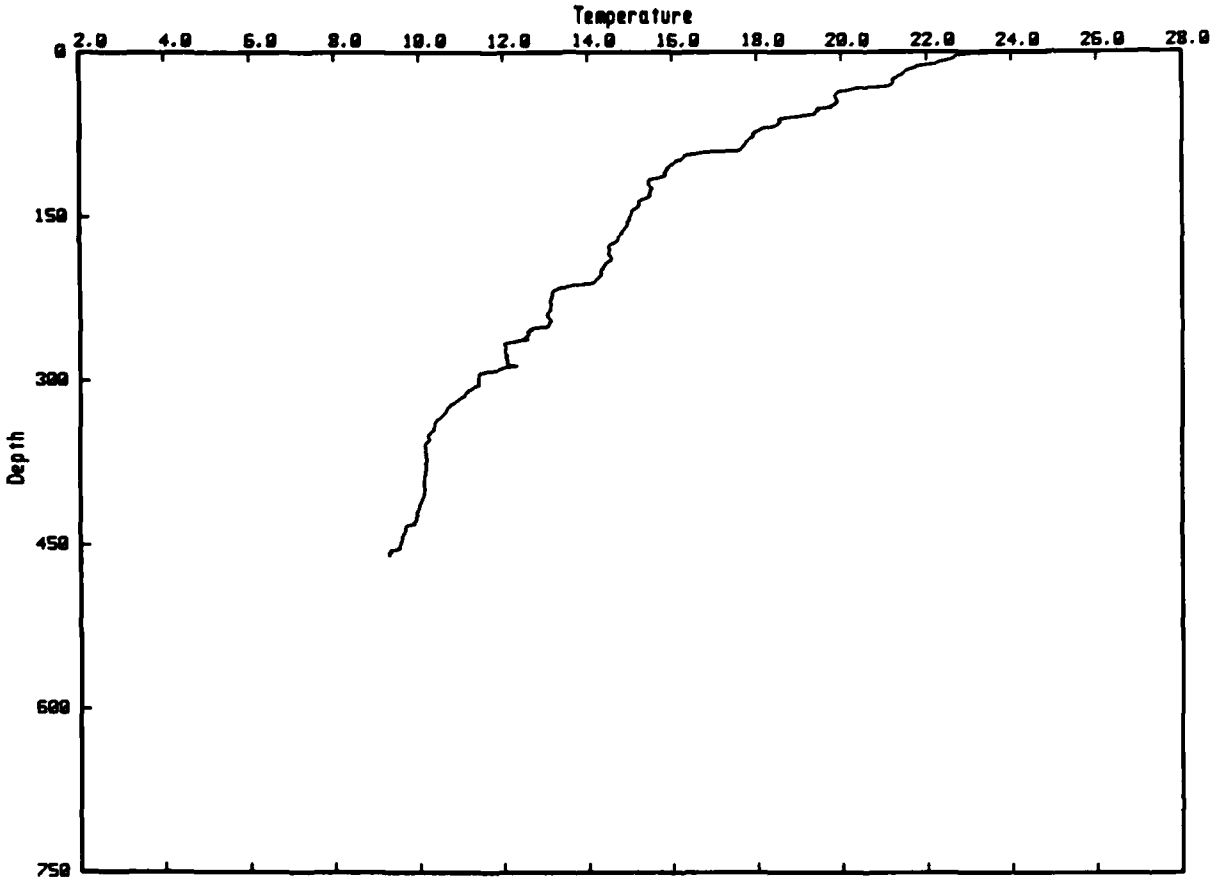


Figure 8. MX0 Section: XBT Station Locations

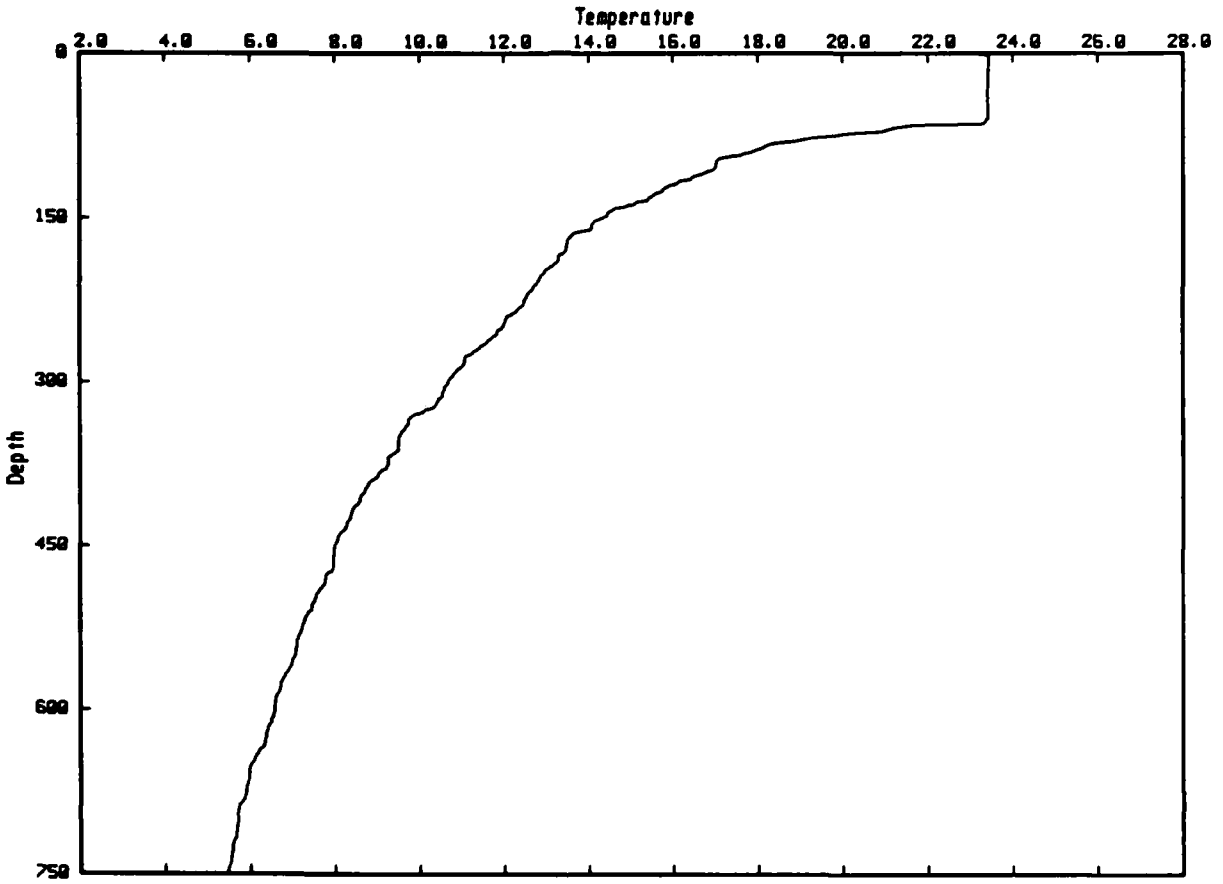
XBT DROP 001 28 40.2N 112 40.6W 15 NOV 84 1333 MST



XBT DROP 001 T-4 RADAR: none GULF COORDS: -24.2 247.0
JDAY 320 2033Z DEPTH 550m/460m SST 22.55 2M TEMPS: SAIL 22.80 XBT 23.04
GULF OF CALIFORNIA: TEST XBT, LONSDALE SILL

Z	TEMP	Z	TEMP	Z	TEMP
10	22.3	200	14.3	390	10.1
20	21.5	210	14.1	400	10.1
30	21.2	220	13.2	410	10.0
40	19.8	230	13.1	420	10.0
50	19.7	240	13.0	430	9.9
60	18.7	250	13.0	440	9.6
70	18.2	260	12.5	450	9.5
80	17.8	270	12.0	460	9.3
90	17.6	280	12.1		
100	16.1	290	11.8		
110	15.8	300	11.4		
120	15.4	310	11.1		
130	15.5	320	10.8		
140	15.2	330	10.6		
150	15.0	340	10.4		
160	14.9	350	10.2		
170	14.7	360	10.1		
180	14.5	370	10.2		
190	14.6	380	10.2		

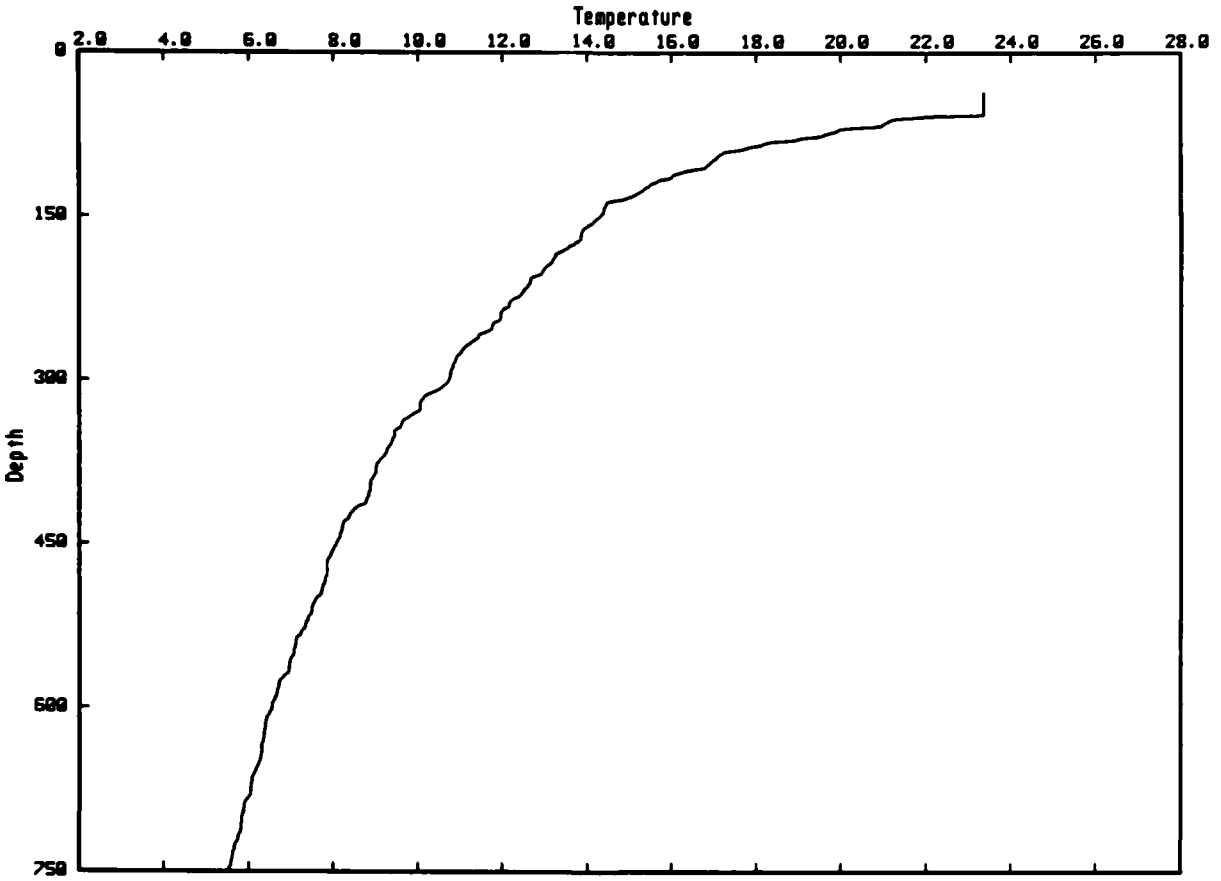
XBT DROP 002 27 43.5N 112 2.7W 20 NOV 84 0511 MST



XBT DROP 002 T-7 RADAR: none GULF COORDS: -36.1 125.8
JDAY 325 1211Z DEPTH 1500m/760m SST 23.30 2M TEMPS: SAIL 23.54 XBT 23.40
GULF OF CALIFORNIA: BEGIN MX0 LINE, MX0-1, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	23.5	200	12.9	390	8.9	580	6.7
20	23.4	210	12.8	400	8.7	590	6.6
30	23.4	220	12.6	410	8.6	600	6.6
40	23.4	230	12.4	420	8.4	610	6.5
50	23.4	240	12.1	430	8.3	620	6.4
60	23.4	250	12.0	440	8.1	630	6.3
70	21.1	260	11.7	450	8.0	640	6.2
80	18.9	270	11.4	460	8.0	650	6.0
90	17.9	280	11.1	470	8.0	660	6.0
100	17.0	290	10.9	480	7.8	670	5.9
110	16.6	300	10.7	490	7.6	680	5.9
120	16.0	310	10.5	500	7.5	690	5.7
130	15.5	320	10.4	510	7.4	700	5.7
140	14.8	330	9.9	520	7.3	710	5.7
150	14.3	340	9.7	530	7.2	720	5.6
160	14.1	350	9.5	540	7.1	730	5.6
170	13.5	360	9.5	550	7.1	740	5.5
180	13.5	370	9.3	560	7.0	750	5.4
190	13.3	380	9.1	570	6.8	760	5.4

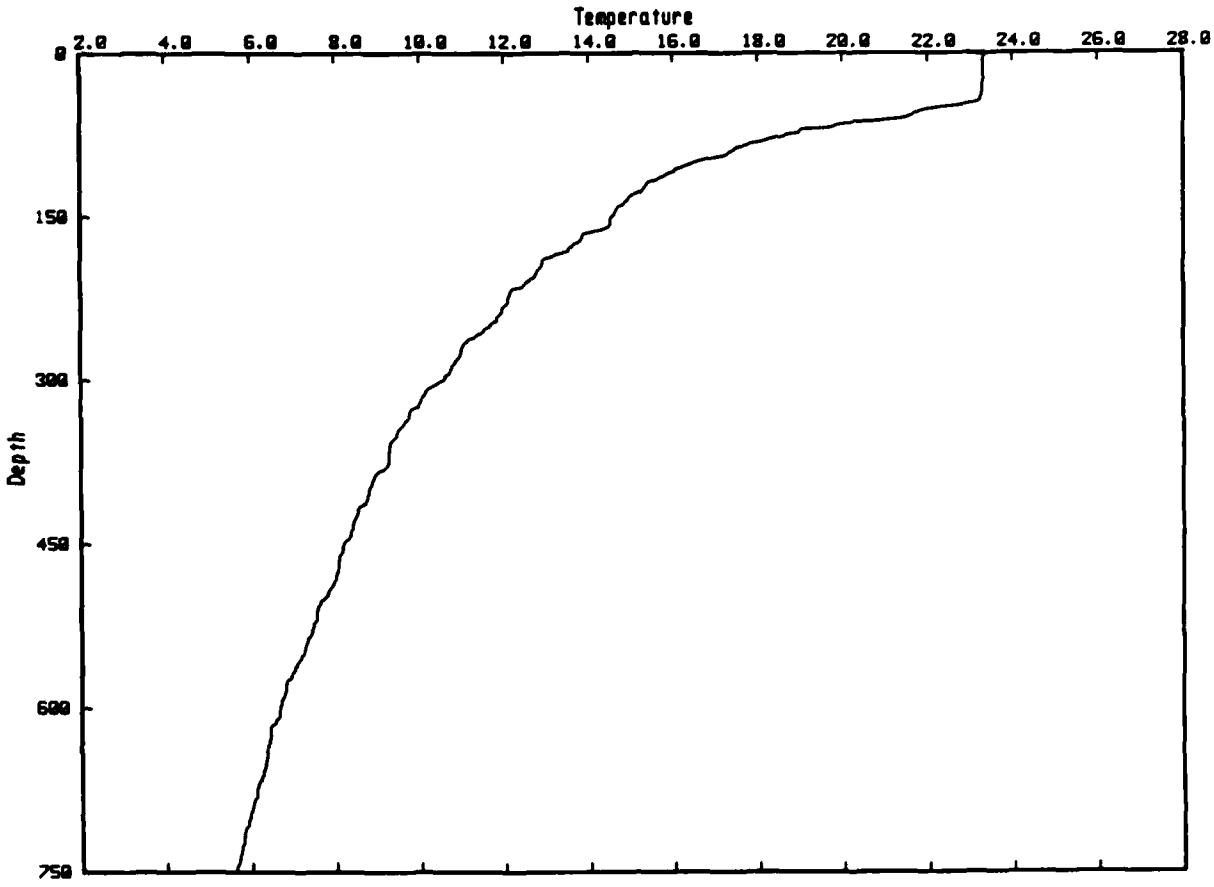
XBT DROP 003 27 44.7N 112 5.1W 20 NOV 84 0531 MST



XBT DROP 003 T-7 RADAR: none GULF COORDS: -38.0 129.9
JDAY 325 1231Z DEPTH 1500m/760m SST 23.20 2M TEMPS: SAIL 23.48 XBT .00
GULF OF CALIFORNIA: MX0-2, SPRING TIDE (NO DATA UNTIL 35 M)

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
40	23.4	230	12.2	420	8.5	610	6.4
50	23.4	240	12.0	430	8.3	620	6.4
60	21.3	250	11.8	440	8.2	630	6.3
70	20.1	260	11.4	450	8.1	640	6.3
80	18.8	270	11.1	460	8.0	650	6.2
90	17.5	280	10.9	470	7.9	660	6.1
100	16.9	290	10.8	480	7.8	670	6.1
110	16.2	300	10.7	490	7.7	680	6.0
120	15.5	310	10.4	500	7.6	690	5.9
130	15.1	320	10.1	510	7.5	700	5.8
140	14.4	330	10.0	520	7.4	710	5.8
150	14.3	340	9.6	530	7.3	720	5.7
160	14.0	350	9.4	540	7.1	730	5.7
170	13.9	360	9.3	550	7.1	740	5.6
180	13.5	370	9.2	560	7.0	750	5.5
190	13.2	380	9.0	570	6.9	760	5.5
200	13.0	390	8.9	580	6.7		
210	12.7	400	8.9	590	6.6		
220	12.5	410	8.8	600	6.6		

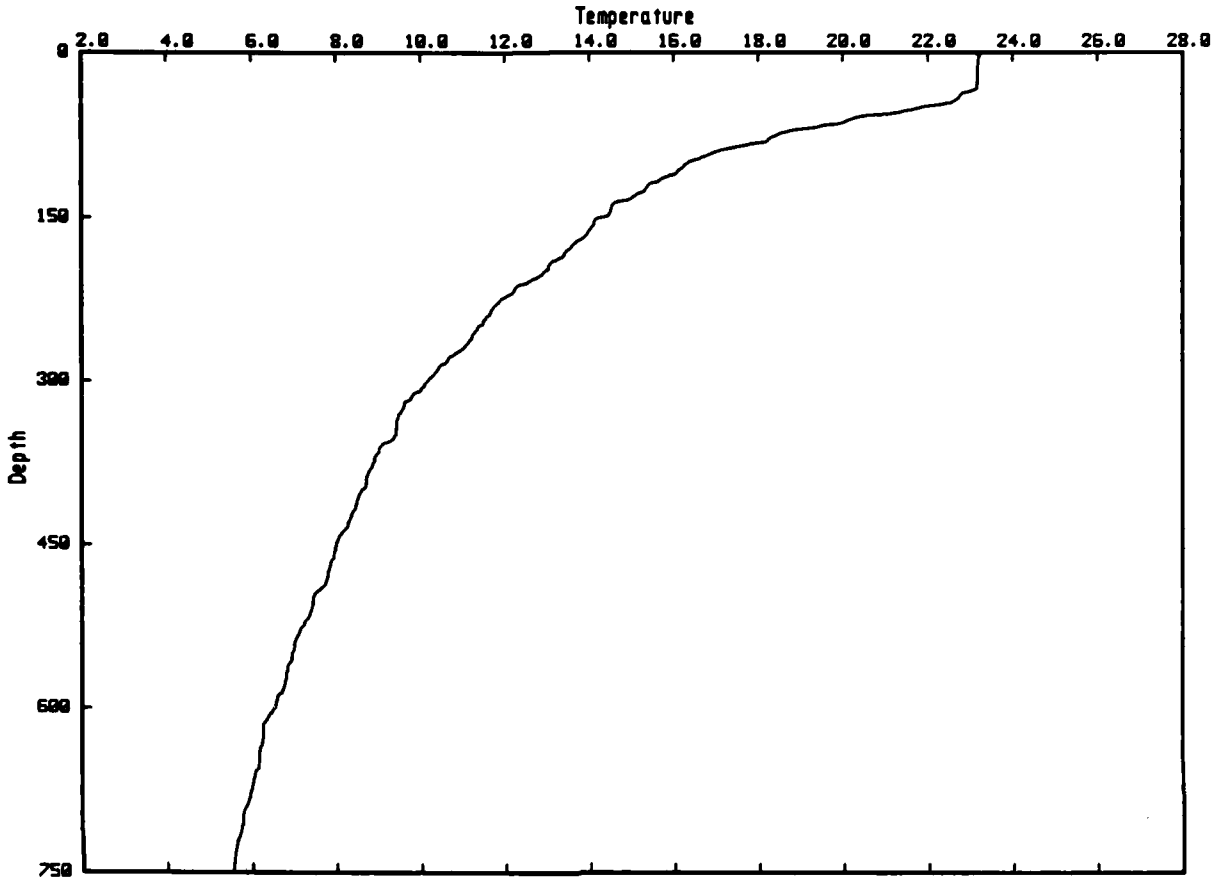
XBT DROP 004 27 45.7N 112 7.0W 20 NOV 84 0545 MST



XBT DROP 004 T-7 RADAR: none GULF COORDS: -39.4 133.2
JDAY 325 1245Z DEPTH 1500m/760m SST 23.20 2M TEMPS: SAIL 23.45 XBT 23.34
GULF OF CALIFORNIA: MX0-3, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	23.3	200	12.8	390	8.9	580	6.8
20	23.3	210	12.5	400	8.8	590	6.7
30	23.3	220	12.1	410	8.7	600	6.7
40	23.2	230	12.1	420	8.5	610	6.6
50	22.4	240	11.9	430	8.4	620	6.4
60	21.4	250	11.7	440	8.3	630	6.4
70	19.1	260	11.3	450	8.2	640	6.4
80	18.2	270	11.0	460	8.1	650	6.3
90	17.4	280	10.9	470	8.1	660	6.3
100	16.6	290	10.7	480	8.0	670	6.1
110	15.9	300	10.5	490	7.9	680	6.1
120	15.4	310	10.1	500	7.7	690	6.0
130	15.0	320	10.0	510	7.6	700	6.0
140	14.8	330	9.8	520	7.5	710	5.9
150	14.6	340	9.6	530	7.4	720	5.8
160	14.5	350	9.4	540	7.3	730	5.8
170	13.8	360	9.3	550	7.2	740	5.7
180	13.5	370	9.3	560	7.1	750	5.6
190	12.9	380	9.2	570	6.9	760	5.6

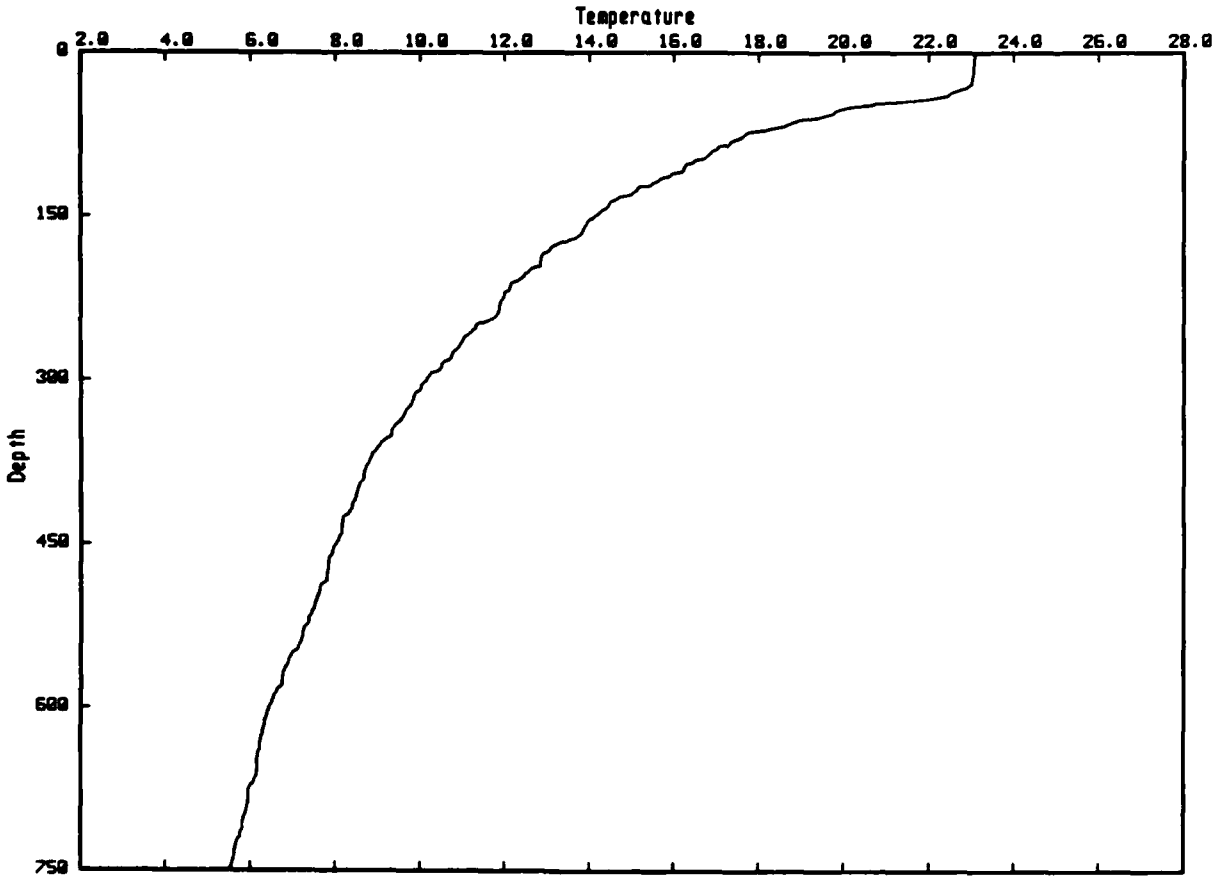
XBT DROP 005 27 47.4N 112 9.7W 20 NOV 84 0600 MST



XBT DROP 005 T-7 RADAR: none GULF COORDS: -41.1 138.4
JDAY 325 1300Z DEPTH 1380m/760m SST 23.10 2M TEMPS: SAIL 23.32 XBT 23.17
GULF OF CALIFORNIA: MX0-4, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	23.2	200	12.9	390	8.7	580	6.8
20	23.2	210	12.5	400	8.6	590	6.6
30	23.2	220	12.1	410	8.5	600	6.6
40	22.7	230	11.8	420	8.4	610	6.4
50	21.9	240	11.6	430	8.3	620	6.3
60	20.2	250	11.4	440	8.1	630	6.3
70	19.1	260	11.2	450	8.0	640	6.2
80	18.2	270	11.0	460	8.0	650	6.2
90	17.1	280	10.6	470	7.9	660	6.1
100	16.4	290	10.4	480	7.8	670	6.0
110	16.1	300	10.2	490	7.6	680	6.0
120	15.4	310	9.9	500	7.5	690	5.9
130	15.1	320	9.6	510	7.4	700	5.8
140	14.5	330	9.5	520	7.3	710	5.8
150	14.3	340	9.4	530	7.1	720	5.7
160	14.1	350	9.4	540	7.0	730	5.6
170	13.8	360	9.0	550	7.0	740	5.6
180	13.5	370	8.9	560	6.9	750	5.6
190	13.2	380	8.8	570	6.8	760	5.5

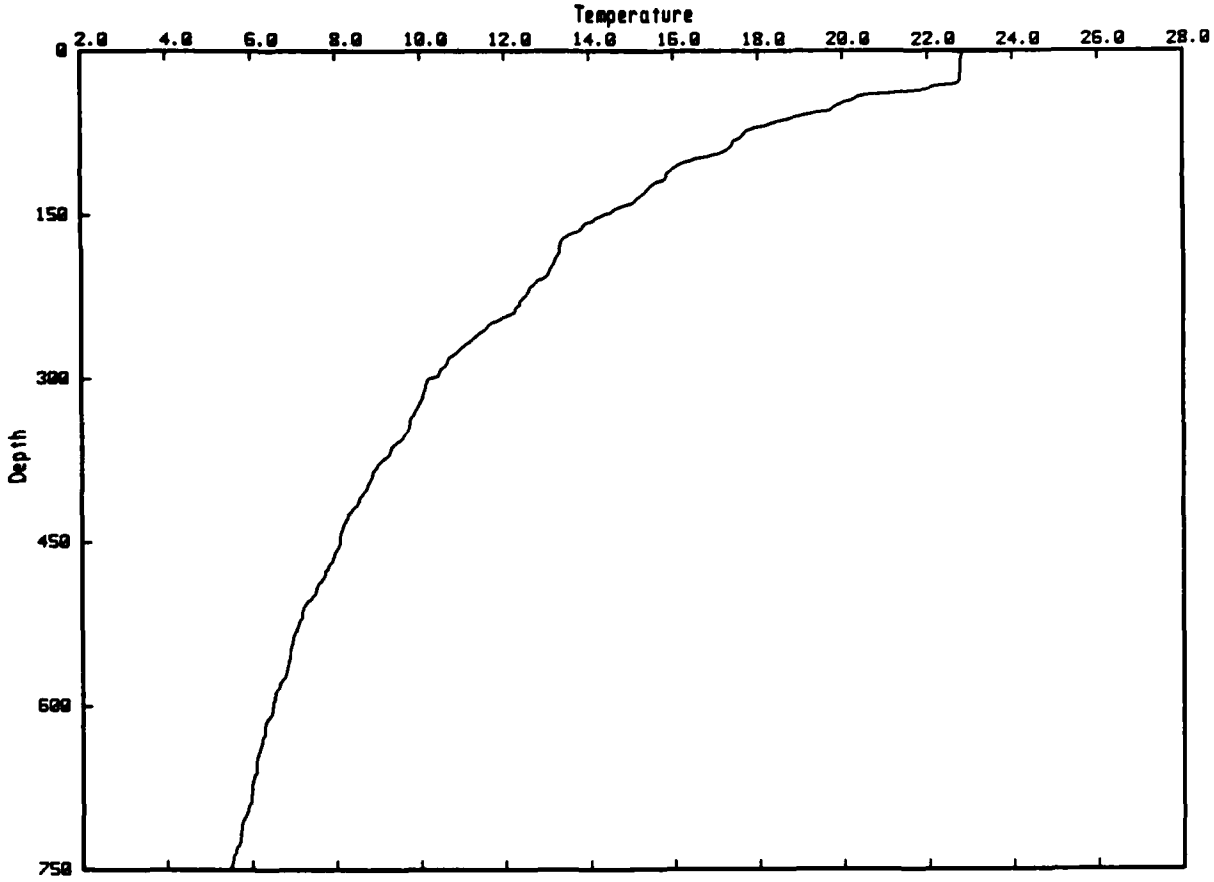
XBT DROP 006 27 48.4N 112 12.2W 20 NOV 84 0615 MST



XBT DROP 006 T-7 RADAR: none GULF COORDS: -43.4 142.3
JDAY 325 1315Z DEPTH 1214m/760m SST 22.90 2M TEMPS: SAIL 23.18 XBT 23.10
GULF OF CALIFORNIA: MX0-5, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	23.1	200	12.6	390	8.7	580	6.7
20	23.1	210	12.2	400	8.5	590	6.5
30	23.0	220	12.0	410	8.5	600	6.4
40	22.4	230	11.9	420	8.3	610	6.3
50	20.2	240	11.8	430	8.2	620	6.3
60	19.3	250	11.3	440	8.1	630	6.2
70	18.3	260	11.1	450	8.0	640	6.2
80	17.4	270	10.9	460	7.9	650	6.2
90	17.0	280	10.7	470	7.8	660	6.1
100	16.5	290	10.5	480	7.8	670	6.1
110	16.1	300	10.1	490	7.6	680	5.9
120	15.5	310	9.9	500	7.6	690	5.9
130	15.0	320	9.8	510	7.5	700	5.9
140	14.5	330	9.6	520	7.4	710	5.8
150	14.1	340	9.4	530	7.2	720	5.7
160	13.9	350	9.3	540	7.2	730	5.6
170	13.7	360	9.0	550	7.0	740	5.6
180	13.1	370	8.8	560	6.9	750	5.5
190	12.9	380	8.7	570	6.8	760	5.4

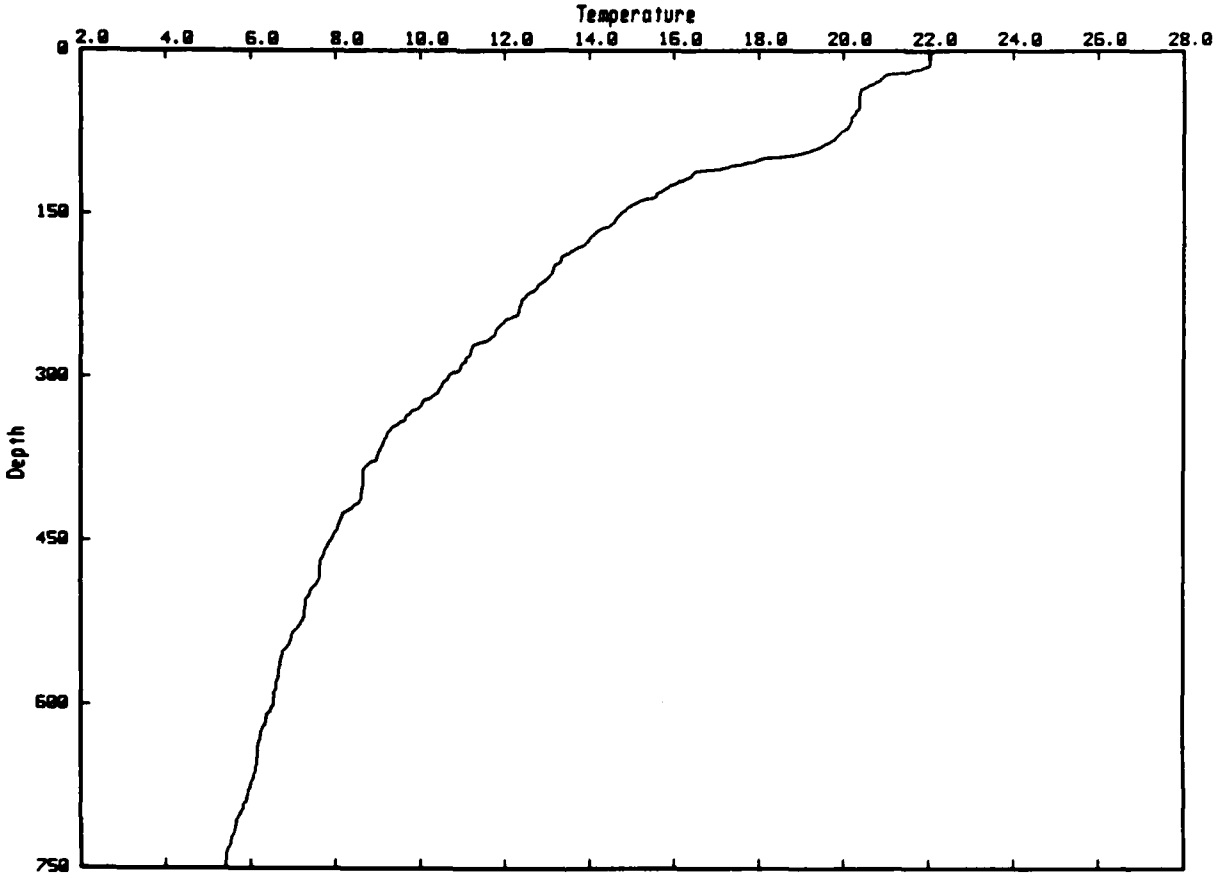
XBT DROP 007 27 49.9N 112 15.1W 20 NOV 84 0630 MST



XBT DROP 007 T-7 RADAR: none GULF COORDS: -45.6 147.3
JDAY 325 1330Z DEPTH 1260m/760m SST 22.55 2M TEMPS: SAIL 22.90 XBT 22.80
GULF OF CALIFORNIA: MX0-6, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	22.8	200	13.1	390	8.9	580	6.7
20	22.8	210	12.8	400	8.7	590	6.5
30	22.7	220	12.6	410	8.6	600	6.5
40	20.6	230	12.4	420	8.4	610	6.4
50	19.9	240	12.2	430	8.2	620	6.3
60	19.0	250	11.7	440	8.1	630	6.2
70	18.1	260	11.4	450	8.1	640	6.2
80	17.6	270	11.0	460	8.0	650	6.1
90	17.3	280	10.7	470	7.9	660	6.1
100	16.4	290	10.6	480	7.7	670	6.0
110	15.9	300	10.2	490	7.6	680	6.0
120	15.6	310	10.1	500	7.4	690	5.9
130	15.3	320	10.0	510	7.2	700	5.8
140	14.9	330	9.9	520	7.2	710	5.7
150	14.4	340	9.7	530	7.1	720	5.7
160	13.9	350	9.7	540	7.0	730	5.6
170	13.5	360	9.4	550	6.9	740	5.6
180	13.3	370	9.3	560	6.9	750	5.5
190	13.2	380	9.0	570	6.8	760	5.4

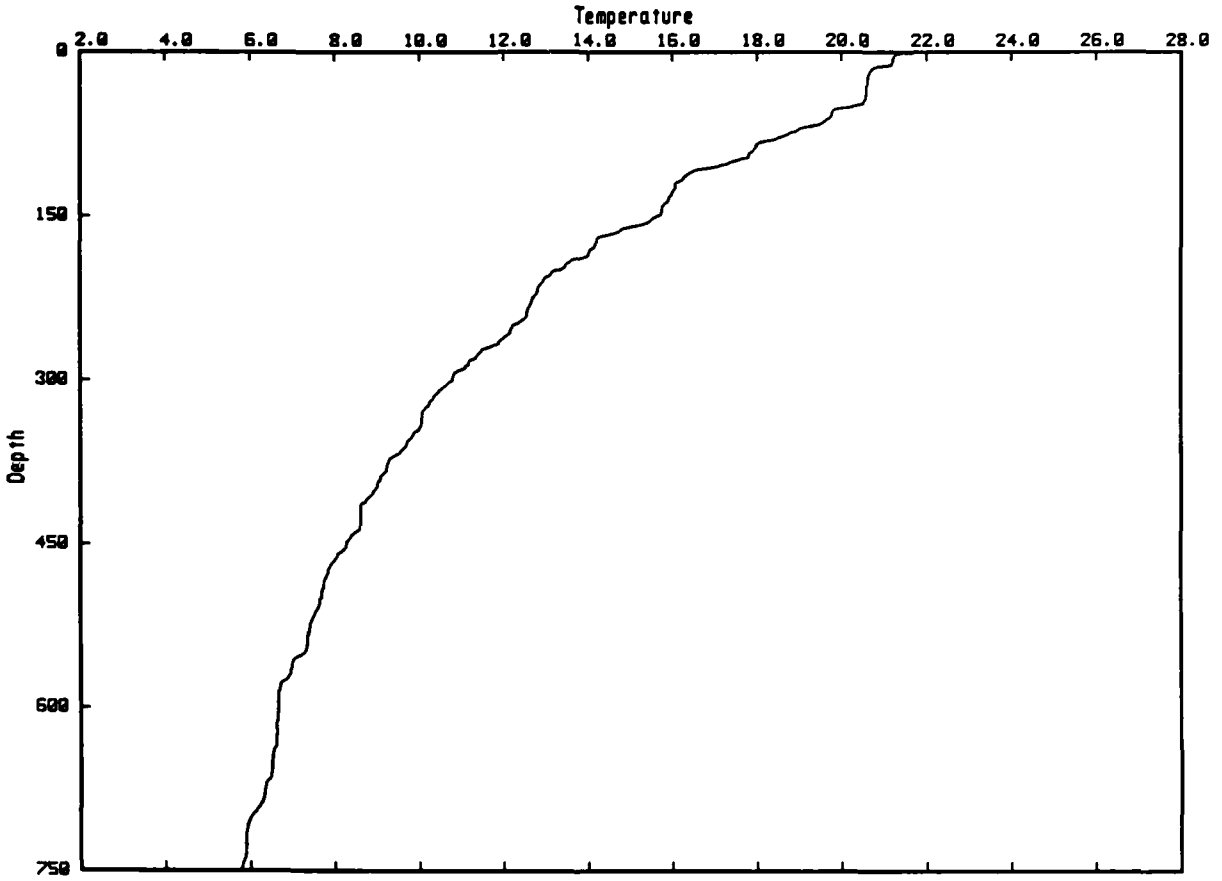
XBT DROP 008 27 50.9N 112 17.5W 20 NOV 84 0645 MST



XBT DROP 008 T-7 RADAR: none GULF COORDS: -47.7 151.1
JDAY 325 1345Z DEPTH 1158m/760m SST 22.20 2M TEMPS: SAIL 22.33 XBT 22.13
GULF OF CALIFORNIA: MX0-7, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	22.0	200	13.2	390	8.7	580	6.6
20	21.5	210	13.0	400	8.7	590	6.6
30	20.7	220	12.7	410	8.6	600	6.5
40	20.4	230	12.4	420	8.4	610	6.4
50	20.4	240	12.3	430	8.1	620	6.3
60	20.2	250	12.0	440	8.0	630	6.2
70	20.1	260	11.8	450	7.9	640	6.2
80	19.8	270	11.3	460	7.7	650	6.2
90	19.4	280	11.2	470	7.6	660	6.1
100	18.1	290	11.0	480	7.6	670	6.0
110	16.7	300	10.7	490	7.6	680	5.9
120	16.2	310	10.5	500	7.4	690	5.9
130	15.7	320	10.2	510	7.3	700	5.8
140	15.1	330	9.9	520	7.3	710	5.7
150	14.7	340	9.6	530	7.1	720	5.6
160	14.5	350	9.3	540	6.9	730	5.5
170	14.1	360	9.1	550	6.8	740	5.4
180	13.8	370	9.0	560	6.7	750	5.4
190	13.4	380	8.8	570	6.7	760	5.3

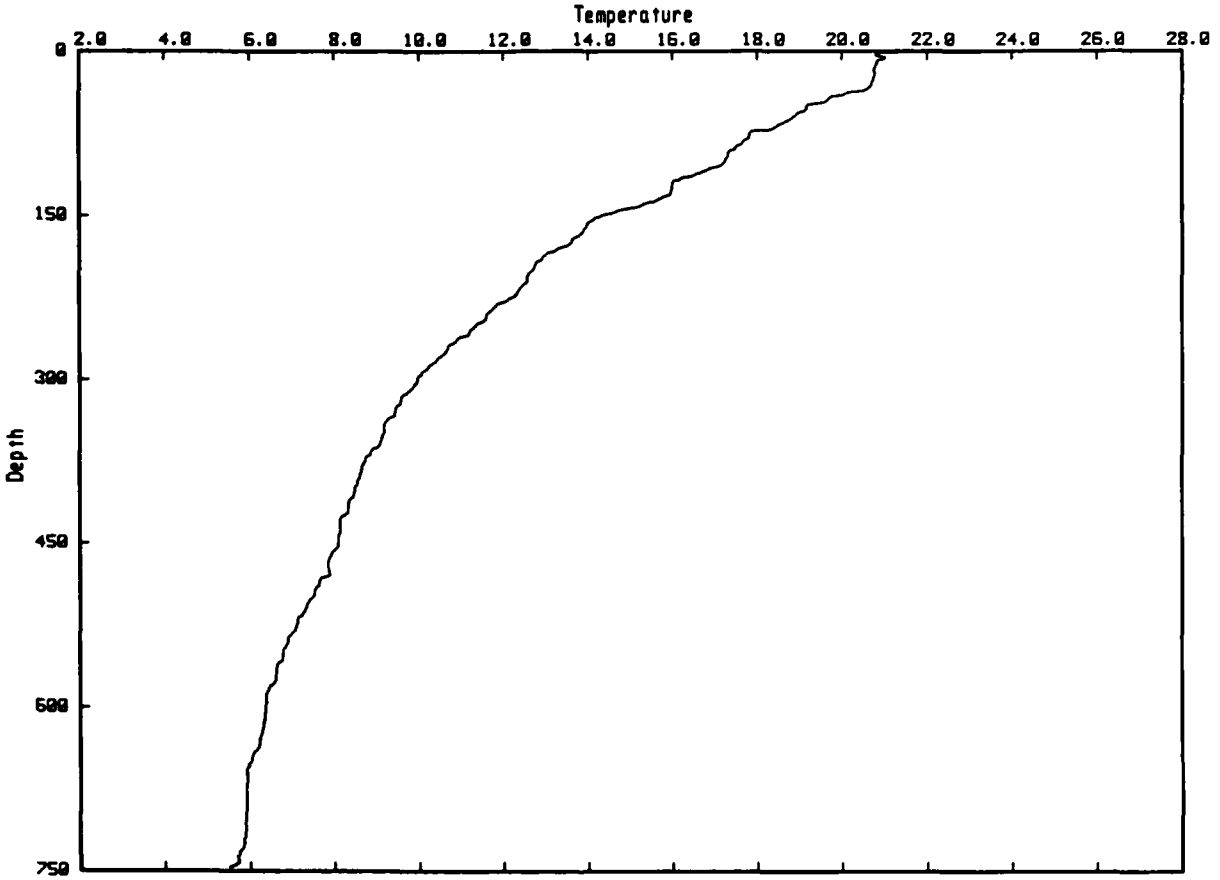
XBT DROP 009 27 52.5N 112 21.2W 20 NOV 84 0706 MST



XBT DROP 009 T-7 RADAR: none GULF COORDS: -50.8 157.1
JDAY 325 1406Z DEPTH 1092m/760m SST 21.15 2M TEMPS: SAIL 21.44 XBT 21.31
GULF OF CALIFORNIA: MX0-8, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	21.2	200	13.3	390	9.1	580	6.7
20	20.7	210	12.9	400	9.0	590	6.7
30	20.6	220	12.8	410	8.7	600	6.7
40	20.6	230	12.7	420	8.6	610	6.6
50	20.3	240	12.6	430	8.6	620	6.6
60	19.7	250	12.2	440	8.5	630	6.6
70	19.1	260	12.0	450	8.3	640	6.6
80	18.4	270	11.6	460	8.1	650	6.5
90	17.9	280	11.3	470	7.9	660	6.5
100	17.5	290	11.0	480	7.8	670	6.4
110	16.4	300	10.8	490	7.7	680	6.3
120	16.1	310	10.5	500	7.7	690	6.2
130	16.0	320	10.2	510	7.6	700	6.1
140	15.8	330	10.1	520	7.5	710	5.9
150	15.7	340	10.1	530	7.4	720	5.9
160	15.1	350	9.8	540	7.4	730	5.9
170	14.2	360	9.7	550	7.3	740	5.8
180	14.1	370	9.4	560	7.0	750	5.8
190	13.7	380	9.2	570	6.9	760	5.7

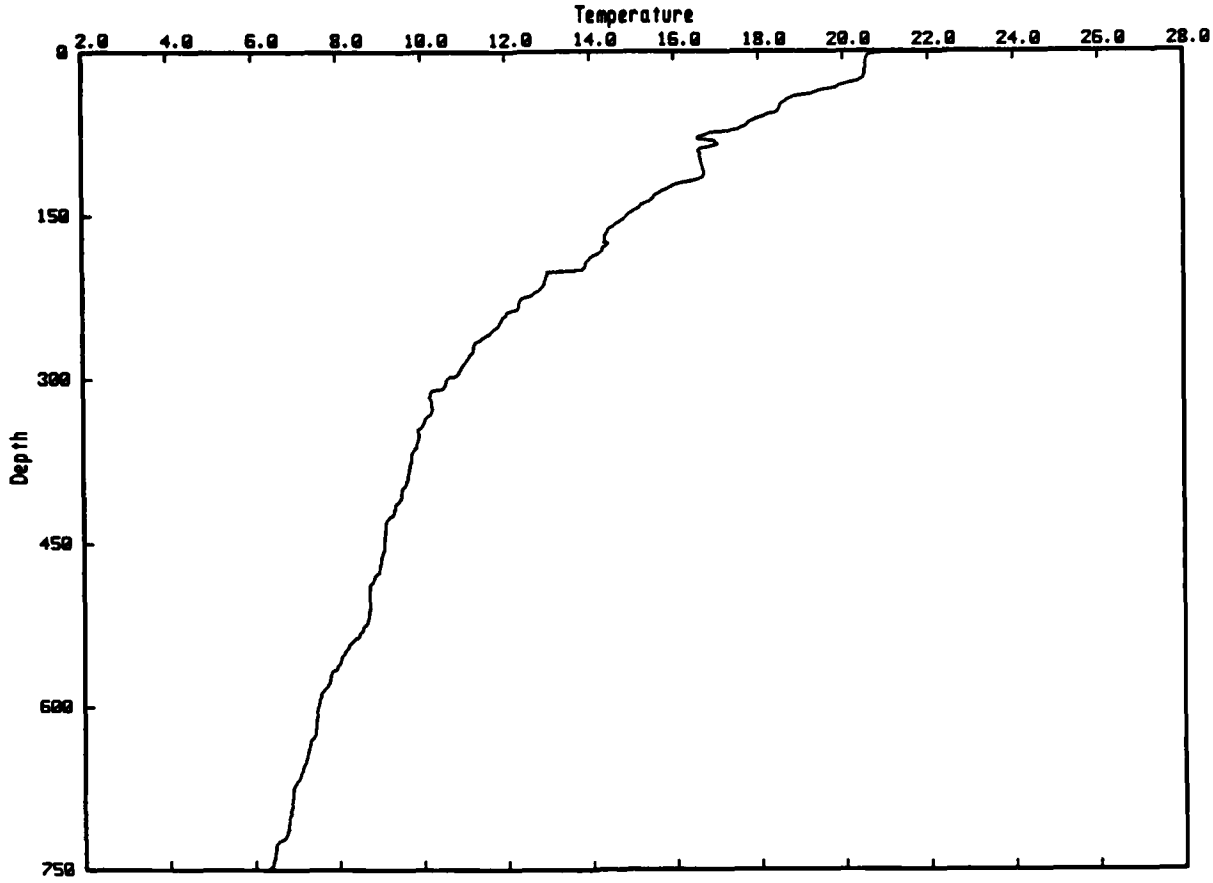
XBT DROP 010 27 54.8N 112 22.7W 20 NOV 84 0720 MST



XBT DROP 010 T-7 RADAR: none GULF COORDS: -50.3 162.0
JDAY 325 1420Z DEPTH 809m/760m SST 20.80 2M TEMPS: SAIL 20.78 XBT 20.93
GULF OF CALIFORNIA: MX00-9, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.8	200	12.7	390	8.6	580	6.5
20	20.8	210	12.6	400	8.5	590	6.4
30	20.7	220	12.3	410	8.4	600	6.4
40	20.1	230	11.9	420	8.3	610	6.3
50	19.2	240	11.6	430	8.1	620	6.3
60	18.9	250	11.4	440	8.1	630	6.2
70	18.4	260	11.1	450	8.1	640	6.1
80	17.8	270	10.7	460	7.9	650	6.0
90	17.5	280	10.5	470	7.8	660	5.9
100	17.3	290	10.2	480	7.8	670	5.9
110	16.7	300	10.0	490	7.6	680	5.9
120	16.0	310	9.8	500	7.5	690	5.9
130	16.0	320	9.6	510	7.3	700	5.9
140	15.3	330	9.4	520	7.1	710	5.9
150	14.4	340	9.2	530	7.1	720	5.9
160	14.0	350	9.2	540	6.9	730	5.8
170	13.7	360	9.1	550	6.8	740	5.7
180	13.4	370	8.8	560	6.7	750	5.5
190	12.9	380	8.7	570	6.6	760	5.4

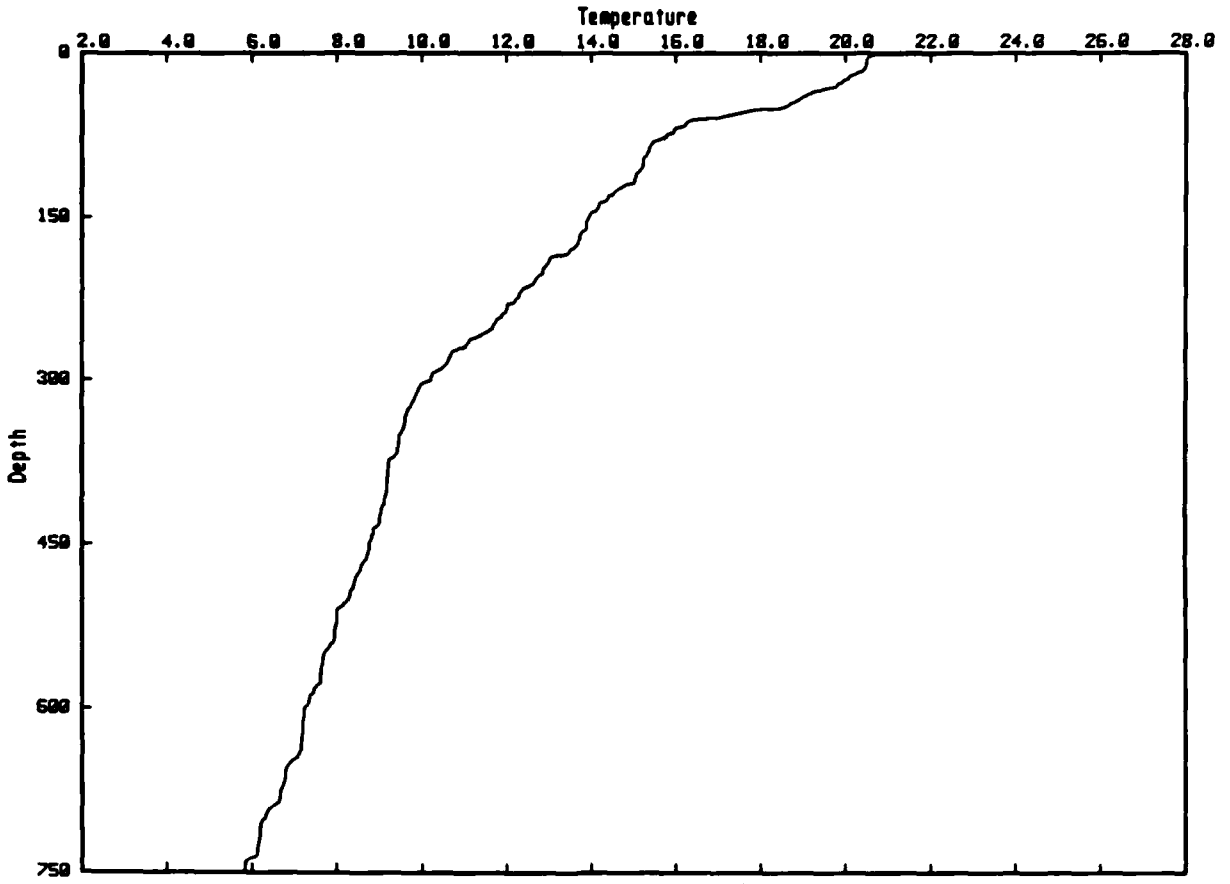
XBT DROP 011 27 56.9N 112 24.1W 20 NOV 84 0735 MST



XBT DROP 011 T-7 RADAR: none GULF COORDS: -49.9 166.5
JDAY 325 1435Z DEPTH 982m/760m SST 20.60 2M TEMPS: SAIL 20.68 XBT 20.89
GULF OF CALIFORNIA: MX0-10, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.5	200	13.9	390	9.7	580	7.7
20	20.5	210	12.9	400	9.5	590	7.6
30	20.1	220	12.7	410	9.5	600	7.5
40	19.1	230	12.3	420	9.3	610	7.5
50	18.5	240	12.0	430	9.1	620	7.5
60	18.1	250	11.8	440	9.1	630	7.4
70	17.6	260	11.5	450	9.1	640	7.3
80	16.5	270	11.2	460	9.1	650	7.2
90	16.6	280	11.1	470	9.0	660	7.1
100	16.6	290	10.9	480	8.9	670	7.0
110	16.7	300	10.6	490	8.7	680	6.9
120	16.3	310	10.3	500	8.7	690	6.9
130	15.6	320	10.2	510	8.7	700	6.8
140	15.2	330	10.2	520	8.7	710	6.8
150	14.9	340	10.0	530	8.6	720	6.7
160	14.6	350	9.9	540	8.3	730	6.5
170	14.4	360	9.9	550	8.1	740	6.4
180	14.3	370	9.7	560	8.0	750	6.3
190	14.0	380	9.7	570	7.8	760	6.2

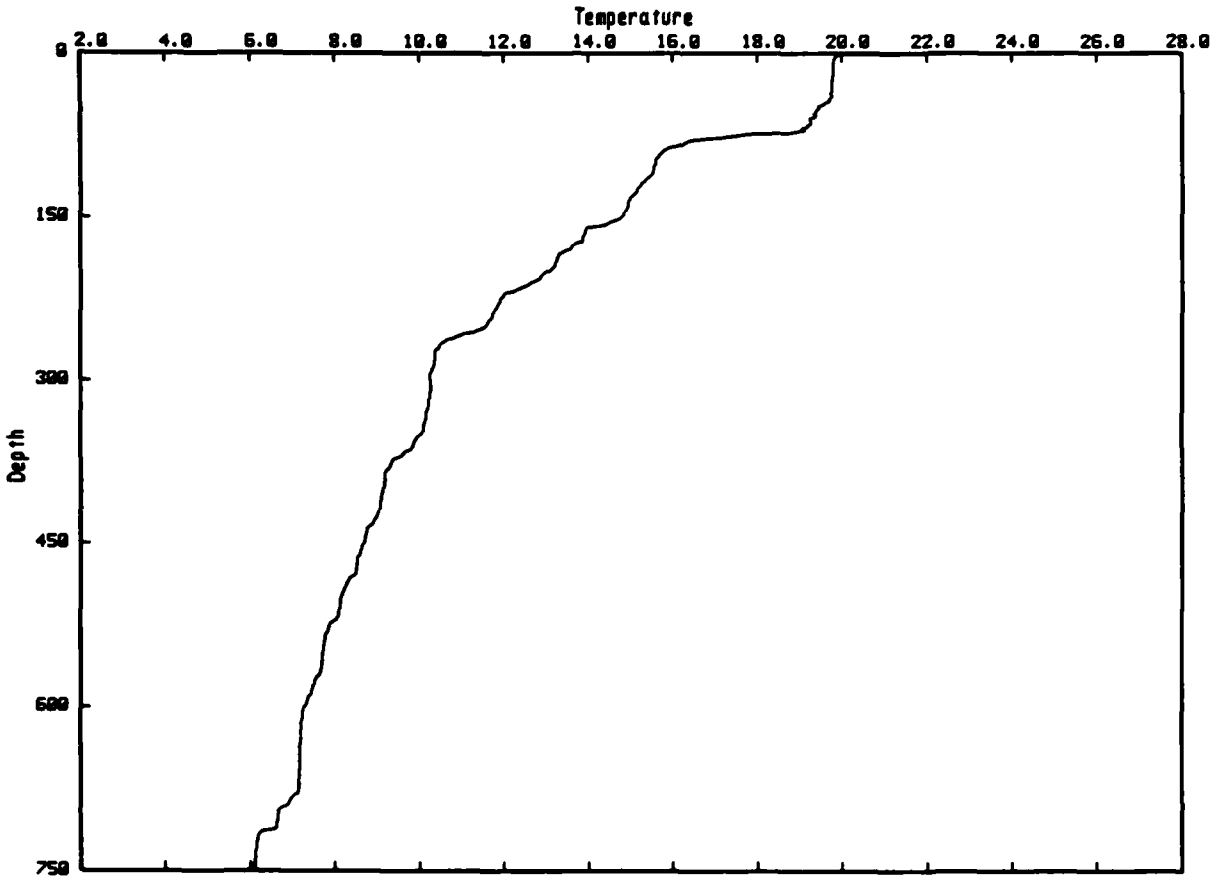
XBT DROP 012 27 59.2N 112 25.6W 20 NOV 84 0750 MST



XBT DROP 012 T-7 RADAR: none GULF COORDS: -49.3 171.4
JDAY 325 1450Z DEPTH 859m/760m SST 20.55 2M TEMPS: SAIL 20.60 XBT 20.61
GULF OF CALIFORNIA: MX0-11, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.5	200	12.9	390	9.2	580	7.5
20	20.2	210	12.7	400	9.2	590	7.4
30	19.8	220	12.3	410	9.1	600	7.3
40	19.0	230	12.1	420	9.1	610	7.2
50	18.5	240	11.9	430	9.0	620	7.2
60	18.6	250	11.7	440	8.8	630	7.2
70	16.0	260	11.3	450	8.8	640	7.1
80	15.5	270	11.0	460	8.7	650	6.9
90	15.4	280	10.7	470	8.6	660	6.8
100	15.2	290	10.5	480	8.5	670	6.7
110	15.1	300	10.2	490	8.4	680	6.7
120	14.9	310	9.9	500	8.3	690	6.5
130	14.4	320	9.8	510	8.0	700	6.3
140	14.2	330	9.7	520	8.0	710	6.2
150	14.0	340	9.6	530	8.0	720	6.2
160	13.9	350	9.5	540	7.9	730	6.1
170	13.7	360	9.5	550	7.7	740	5.9
180	13.5	370	9.4	560	7.7	750	5.8
190	13.0	380	9.2	570	7.6	760	5.8

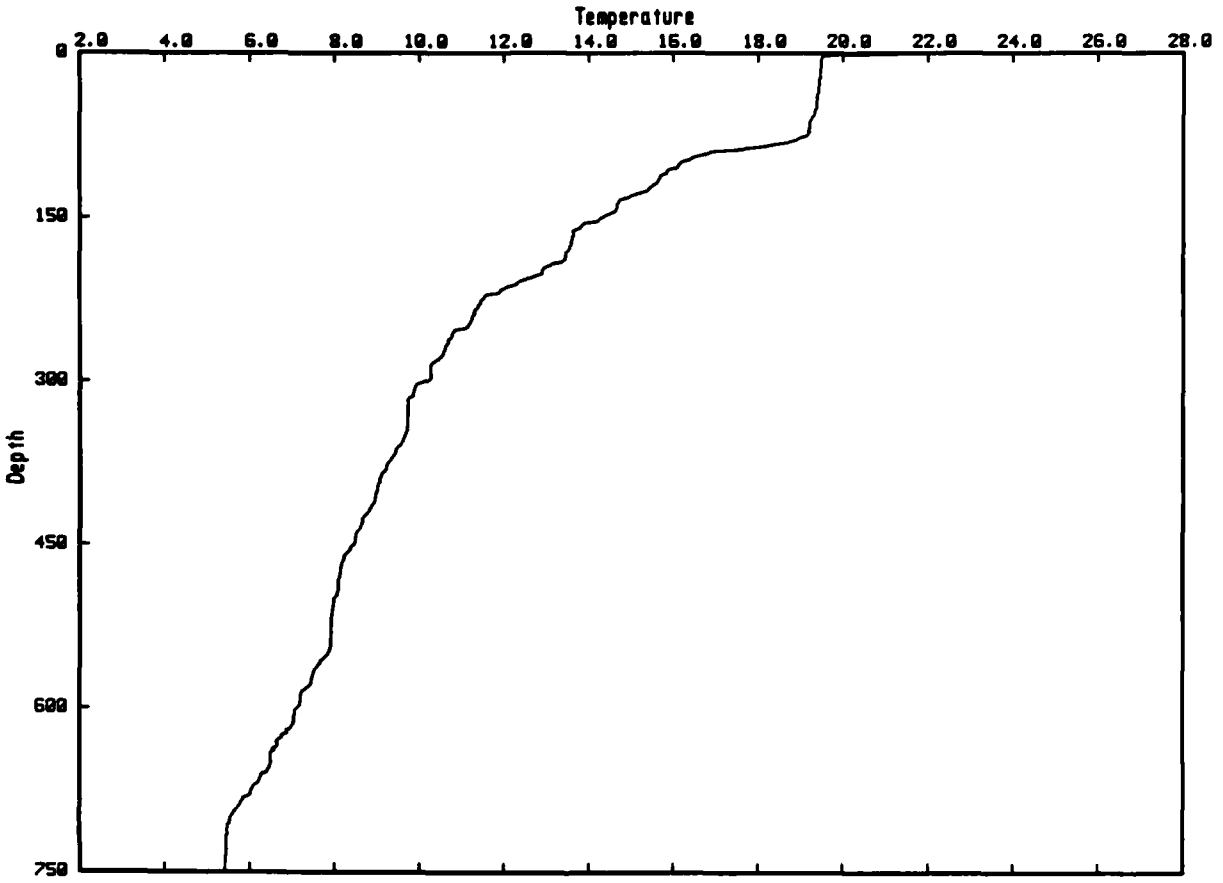
XBT DROP 015 28 2.8N 112 28.0W 20 NOV 84 0813 MST



XBT DROP 015 T-7 RADAR: none GULF COORDS: -48.6 179.0
JDAY 325 1513Z DEPTH 982m/760m SST 20.00 2M TEMPS: SAIL 20.28 XBT 19.90
GULF OF CALIFORNIA: MX0-12, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.8	200	13.0	390	9.2	580	7.5
20	19.8	210	12.6	400	9.1	590	7.4
30	19.8	220	12.0	410	9.1	600	7.3
40	19.7	230	11.9	420	9.1	610	7.2
50	19.4	240	11.7	430	8.9	620	7.2
60	19.2	250	11.6	440	8.7	630	7.2
70	19.0	260	10.9	450	8.7	640	7.2
80	16.4	270	10.5	460	8.6	650	7.2
90	15.8	280	10.4	470	8.5	660	7.2
100	15.6	290	10.3	480	8.4	670	7.1
110	15.5	300	10.3	490	8.2	680	7.1
120	15.3	310	10.3	500	8.1	690	6.9
130	15.1	320	10.2	510	8.1	700	6.7
140	14.9	330	10.2	520	8.0	710	6.6
150	14.8	340	10.1	530	7.8	720	6.2
160	14.0	350	10.0	540	7.8	730	6.2
170	13.9	360	9.9	550	7.7	740	6.1
180	13.5	370	9.5	560	7.7	750	6.1
190	13.3	380	9.3	570	7.6	760	5.9

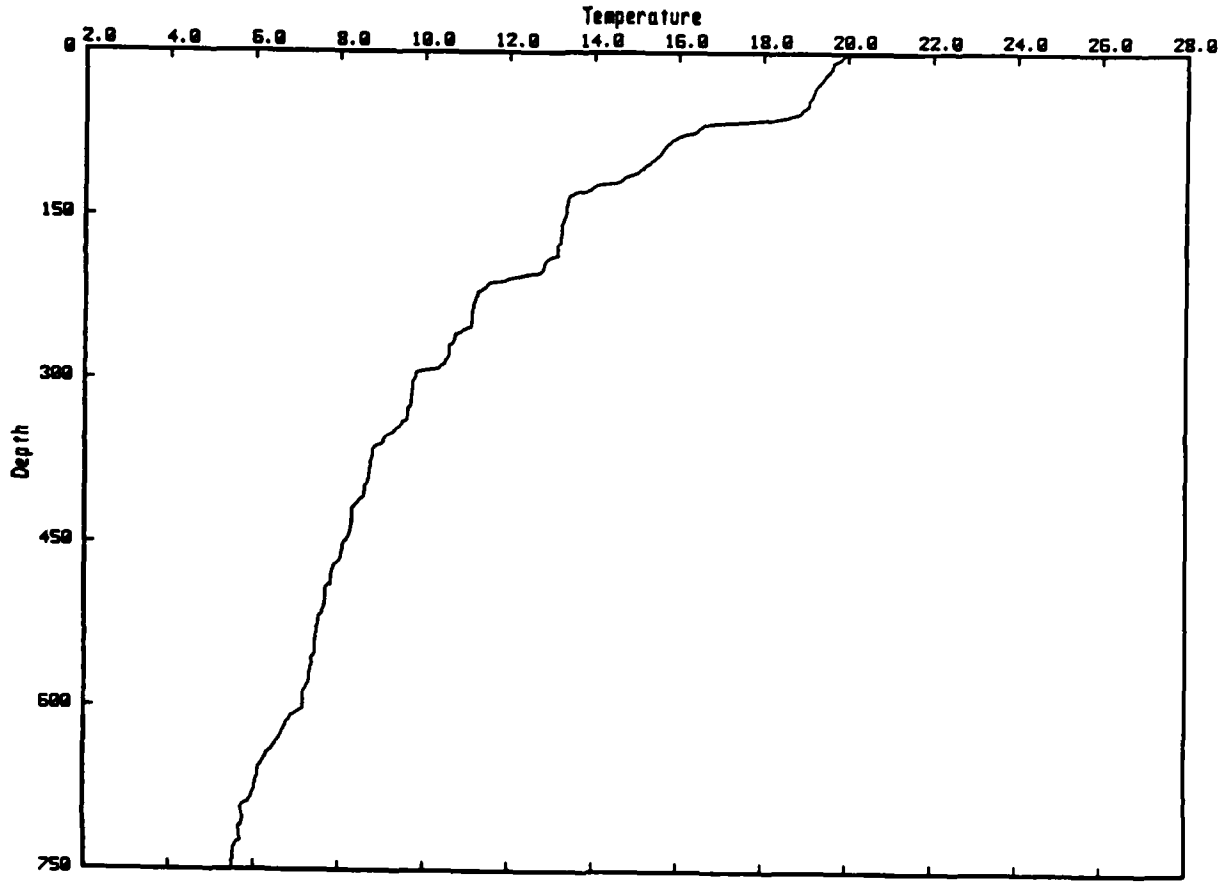
XBT DROP 017 28 6.2N 112 30.0W 20 NOV 84 0834 MST



XBT DROP 017 T-7 RADAR: none GULF COORDS: -47.5 186.0
JDAY 325 1534Z DEPTH 825m/760m SST 19.60 2M TEMPS: SAIL 19.66 XBT 19.96
GULF OF CALIFORNIA: MX0-13, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.5	200	12.9	390	9.1	580	7.4
20	19.5	210	12.3	400	9.0	590	7.2
30	19.4	220	11.6	410	8.9	600	7.1
40	19.4	230	11.4	420	8.8	610	7.1
50	19.4	240	11.3	430	8.6	620	6.9
60	19.3	250	11.1	440	8.5	630	6.8
70	19.2	260	10.8	450	8.5	640	6.5
80	18.8	270	10.6	460	8.2	650	6.5
90	16.9	280	10.4	470	8.2	660	6.3
100	16.2	290	10.3	480	8.1	670	6.2
110	15.8	300	10.1	490	8.1	680	6.0
120	15.6	310	9.9	500	8.0	690	5.7
130	15.0	320	9.7	510	8.0	700	5.6
140	14.7	330	9.7	520	7.9	710	5.5
150	14.3	340	9.7	530	7.9	720	5.5
160	13.8	350	9.7	540	7.9	730	5.4
170	13.6	360	9.5	550	7.8	740	5.4
180	13.5	370	9.3	560	7.6	750	5.4
190	13.4	380	9.2	570	7.5	760	5.3

XBT DROP 019 28 6.9N 112 29.4W 20 NOV 84 0935 MST



XBT DROP 019 T-7 RADAR: none GULF COORDS: -45.9 186.5
JDAY 325 1635Z DEPTH 805m/760m SST 20.05 2M TEMPS: SAIL 19.94 XBT 19.96
GULF OF CALIFORNIA: END MXO LINE, MXO-14, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.6	200	12.8	390	8.7	580	7.3
20	19.5	210	11.8	400	8.6	590	7.2
30	19.3	220	11.3	410	8.5	600	7.2
40	19.1	230	11.2	420	8.3	610	6.9
50	19.0	240	11.1	430	8.3	620	6.7
60	18.4	250	11.1	440	8.3	630	6.6
70	16.5	260	10.7	450	8.1	640	6.4
80	15.8	270	10.6	460	8.1	650	6.2
90	15.6	280	10.6	470	7.9	660	6.1
100	15.3	290	10.4	480	7.8	670	6.1
110	15.0	300	9.8	490	7.7	680	6.0
120	14.5	310	9.7	500	7.7	690	5.8
130	13.5	320	9.7	510	7.6	700	5.8
140	13.4	330	9.6	520	7.5	710	5.7
150	13.3	340	9.5	530	7.5	720	5.7
160	13.3	350	9.2	540	7.4	730	5.5
170	13.2	360	8.9	550	7.4	740	5.5
180	13.2	370	8.8	560	7.4	750	5.5
190	12.9	380	8.7	570	7.3	760	5.4

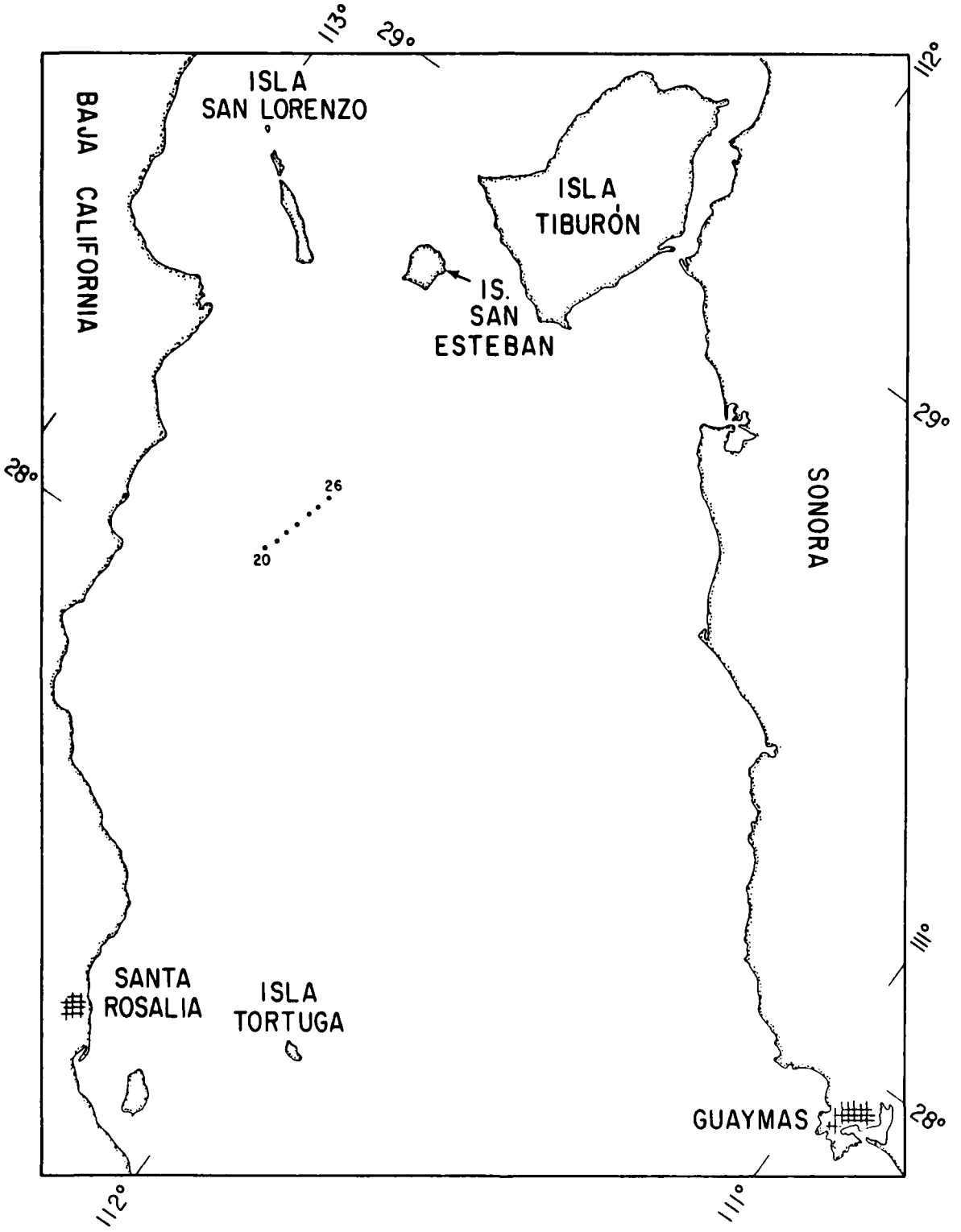
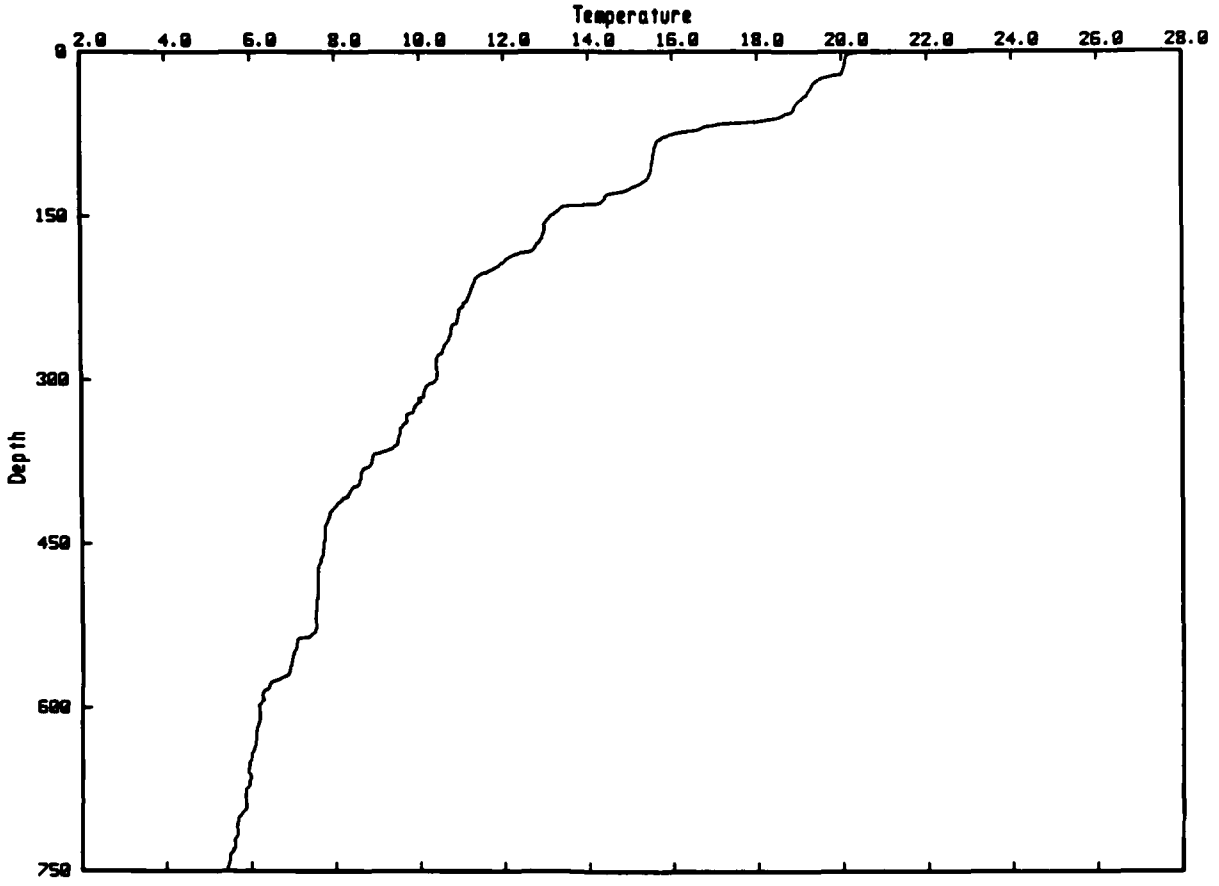


Figure 9. MX1A Section: XBT Station Locations

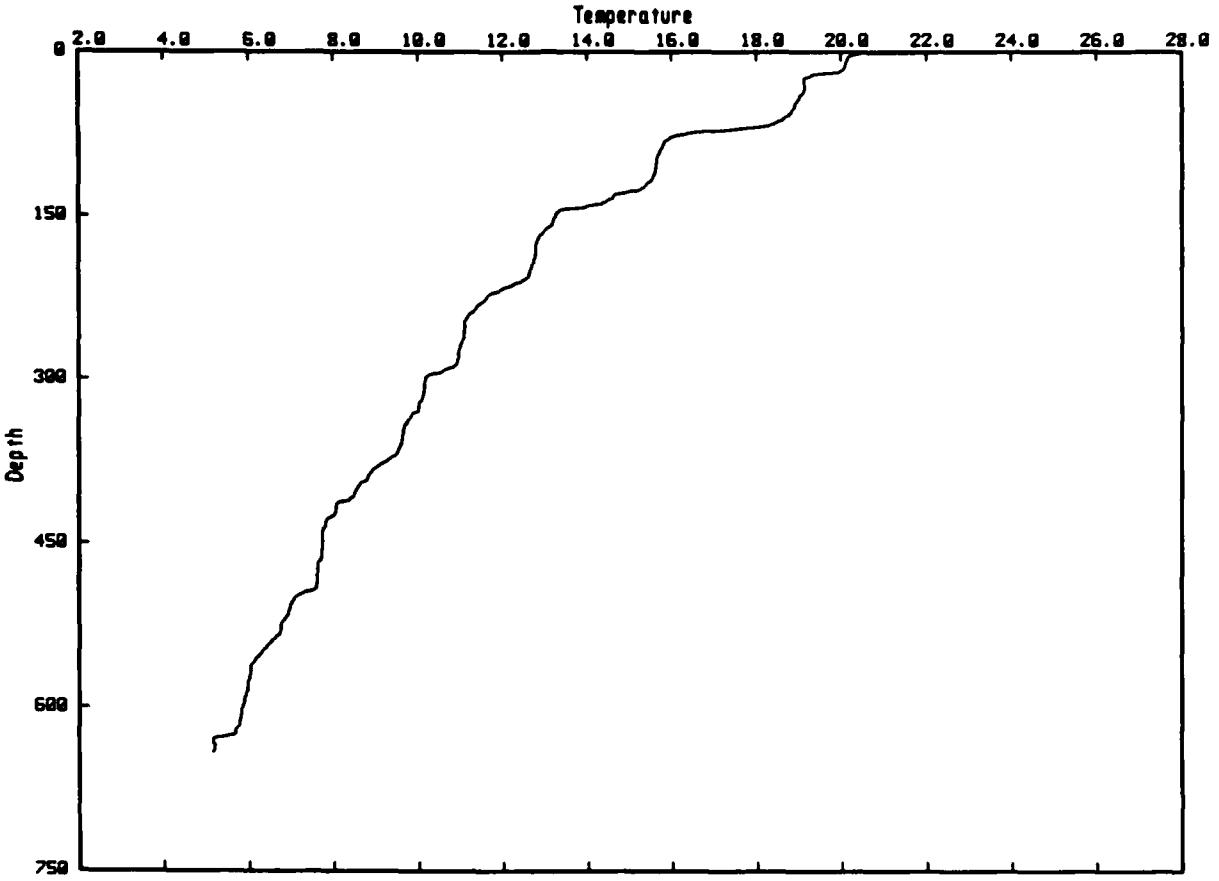
XBT DROP 020 28 7.8N 112 29.1W 20 NOV 84 0943 MST



XBT DROP 020 T-7 RADAR: none GULF COORDS: -44.5 187.6
JDAY 325 1643Z DEPTH 768m/760m SST 20.20 2M TEMPS: SAIL 20.14 XBT 20.27
GULF OF CALIFORNIA: GUAYMAS BASIIN, BEGIN MX1A LINE; MX1A-1, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.1	200	11.7	390	8.6	580	6.4
20	20.0	210	11.3	400	8.4	590	6.2
30	19.3	220	11.2	410	8.1	600	6.2
40	19.2	230	11.0	420	7.9	610	6.2
50	18.9	240	10.9	430	7.8	620	6.1
60	18.5	250	10.8	440	7.7	630	6.1
70	16.7	260	10.7	450	7.7	640	6.0
80	15.7	270	10.6	460	7.7	650	5.9
90	15.6	280	10.4	470	7.6	660	5.9
100	15.5	290	10.4	480	7.6	670	5.9
110	15.5	300	10.4	490	7.6	680	5.8
120	15.3	310	10.1	500	7.6	690	5.9
130	14.5	320	10.0	510	7.5	700	5.7
140	14.1	330	9.8	520	7.5	710	5.6
150	13.1	340	9.6	530	7.5	720	5.6
160	13.0	350	9.5	540	7.1	730	5.6
170	12.9	360	9.4	550	7.0	740	5.5
180	12.7	370	8.9	560	6.9	750	5.4
190	12.1	380	8.7	570	6.8	760	5.4

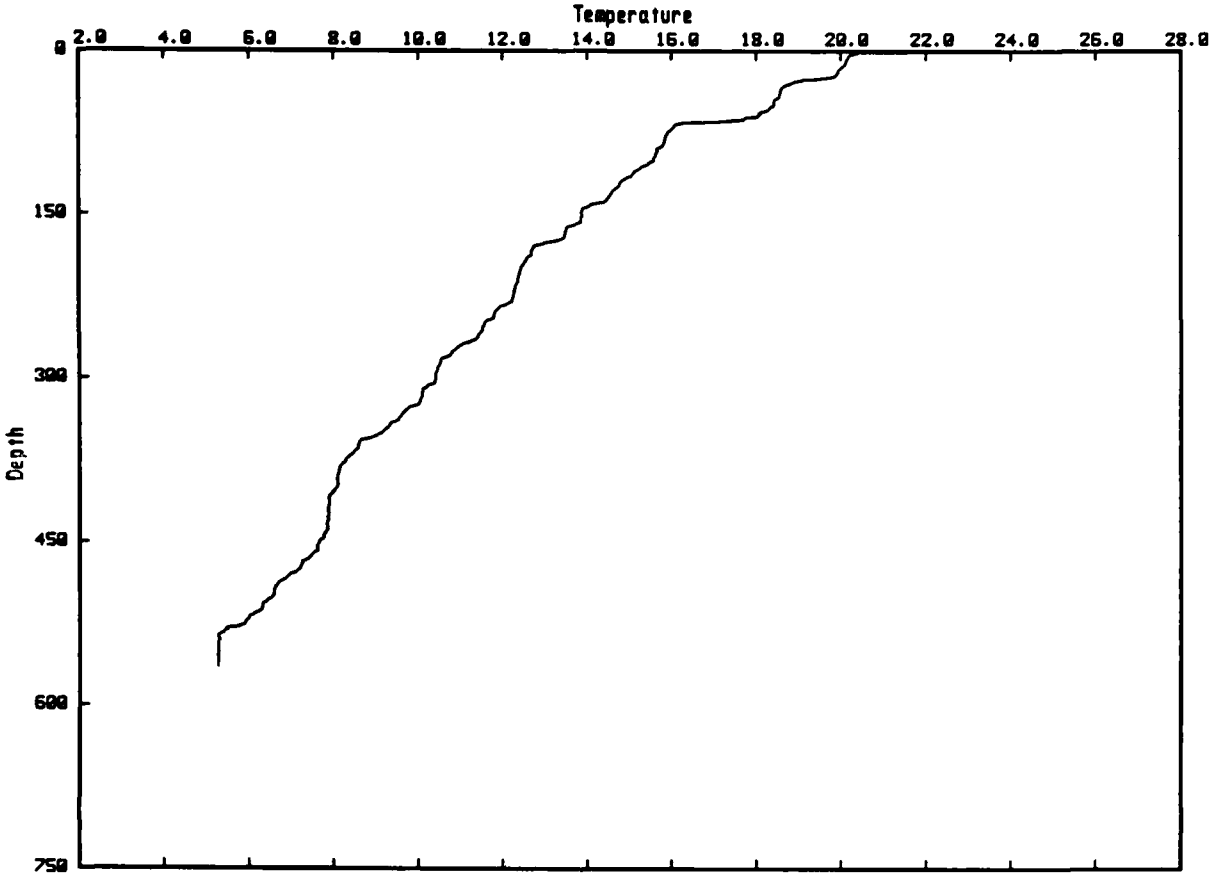
XBT DROP 021 28 9.3N 112 28.6W 20 NOV 84 0951 MST



XBT DROP 021 T-7 RADAR: none GULF COORDS: -42.2 189.3
JDAY 325 1651Z DEPTH 642m/642m SST 20.30 2M TEMPS: SAIL 20.27 XBT 20.43
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1A-2, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.1	200	12.7	390	8.8	580	6.0
20	19.5	210	12.4	400	8.6	590	5.9
30	19.1	220	11.8	410	8.4	600	5.8
40	19.0	230	11.5	420	8.1	610	5.8
50	18.9	240	11.2	430	7.8	620	5.7
60	18.7	250	11.1	440	7.7	630	5.2
70	17.9	260	11.1	450	7.7	640	5.2
80	15.9	270	11.0	460	7.7		
90	15.7	280	11.0	470	7.6		
100	15.6	290	10.7	480	7.6		
110	15.6	300	10.2	490	7.6		
120	15.4	310	10.1	500	7.1		
130	14.7	320	10.1	510	7.0		
140	14.2	330	10.0	520	6.8		
150	13.3	340	9.8	530	6.7		
160	13.1	350	9.6	540	6.5		
170	12.8	360	9.6	550	6.3		
180	12.8	370	9.5	560	6.1		
190	12.7	380	9.0	570	6.0		

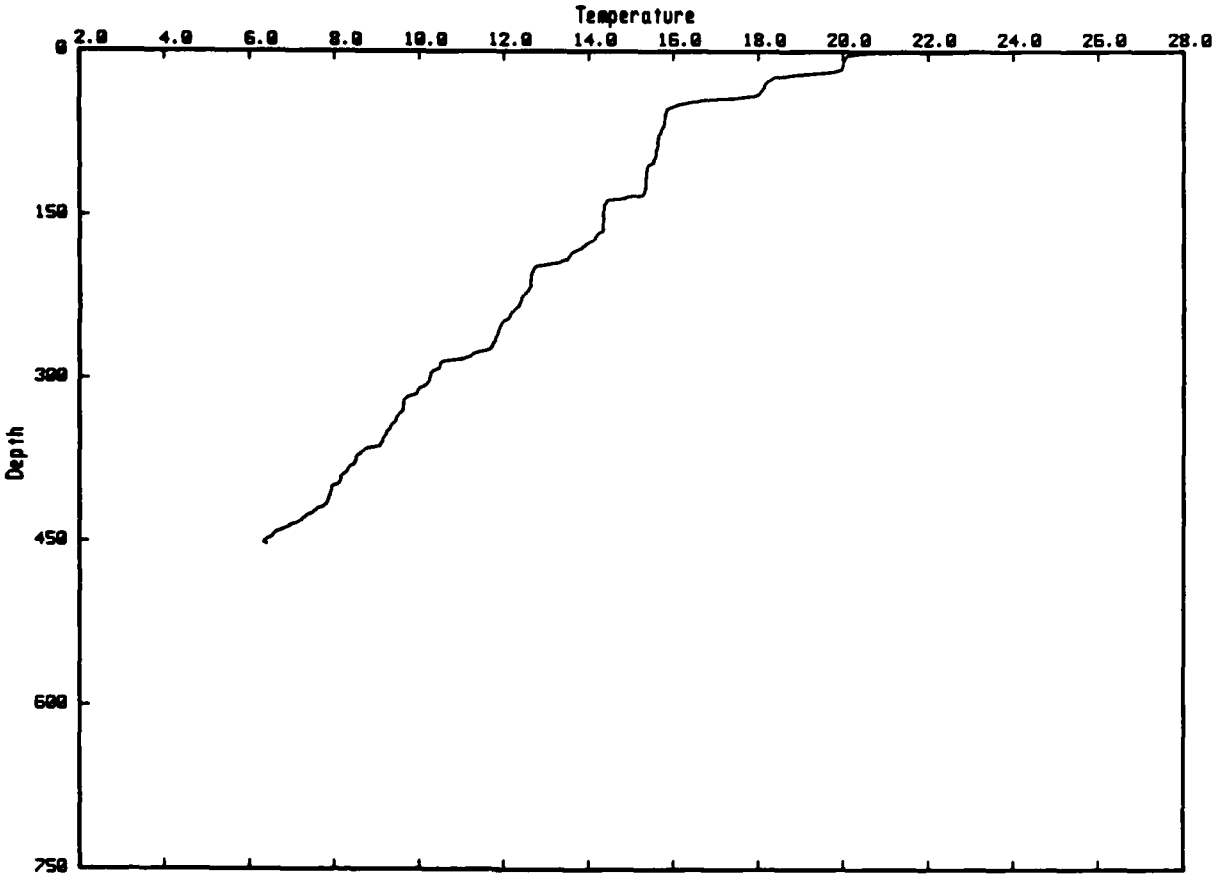
XBT DROP 022 28 10.6N 112 28.2W 20 NOV 84 0959 MST



XBT DROP 022 T-7 RADAR: none GULF COORDS: -40.3 190.9
JDAY 325 1659Z DEPTH 568m/566m SST 20.30 2M TEMPS: SAIL 20.24 XBT 20.42
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1A-3

Z	TEMP	Z	TEMP	Z	TEMP
10	20.1	200	12.4	390	8.1
20	19.9	210	12.4	400	8.1
30	18.9	220	12.3	410	7.9
40	18.6	230	12.2	420	7.9
50	18.4	240	11.8	430	7.9
60	18.0	250	11.6	440	7.8
70	16.1	260	11.4	450	7.7
80	15.8	270	11.0	460	7.5
90	15.7	280	10.7	470	7.3
100	15.6	290	10.5	480	6.9
110	15.2	300	10.4	490	6.7
120	14.8	310	10.1	500	6.6
130	14.6	320	10.1	510	6.3
140	14.3	330	9.7	520	6.0
150	13.9	340	9.4	530	5.5
160	13.7	350	9.1	540	5.3
170	13.5	360	8.6	550	5.3
180	12.7	370	8.4	560	5.3
190	12.6	380	8.2		

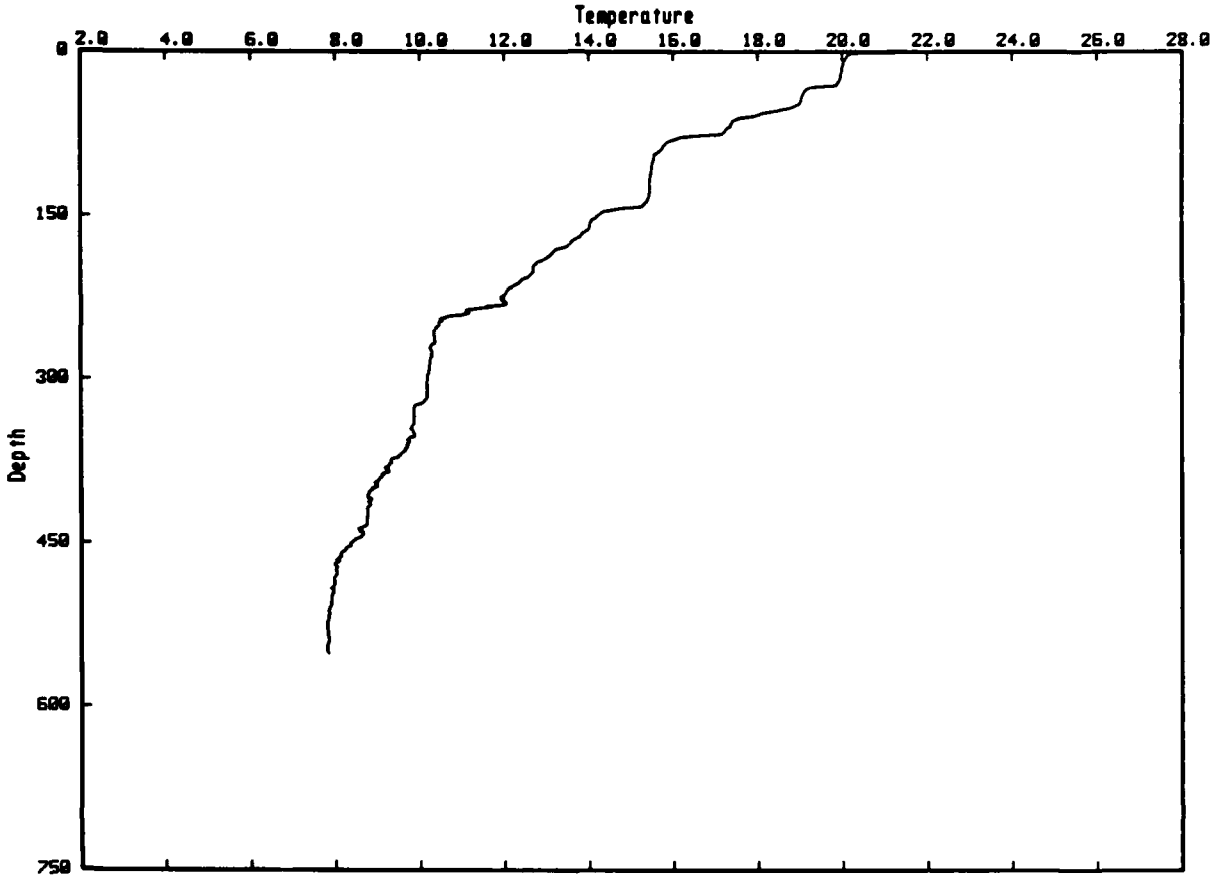
XBT DROP 023 28 11.9N 112 27.8W 20 NOV 84 1007 MST



XBT DROP 023 T-7 RADAR: none GULF COORDS: -38.3 192.4
JDAY 325 1707Z DEPTH 459m/453m SST 20.40 2M TEMPS: SAIL 20.17 XBT 20.43
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1A-4, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	20.0	200	12.7	390	8.1
20	19.4	210	12.6	400	7.9
30	18.2	220	12.5	410	7.8
40	18.0	230	12.4	420	7.6
50	16.1	240	12.2	430	7.2
60	15.8	250	11.9	440	6.7
70	15.8	260	11.8	450	6.4
80	15.6	270	11.7		
90	15.6	280	11.2		
100	15.5	290	10.5		
110	15.4	300	10.2		
120	15.4	310	10.0		
130	15.3	320	9.6		
140	14.4	330	9.6		
150	14.4	340	9.4		
160	14.3	350	9.2		
170	14.2	360	9.1		
180	13.9	370	8.6		
190	13.5	380	8.4		

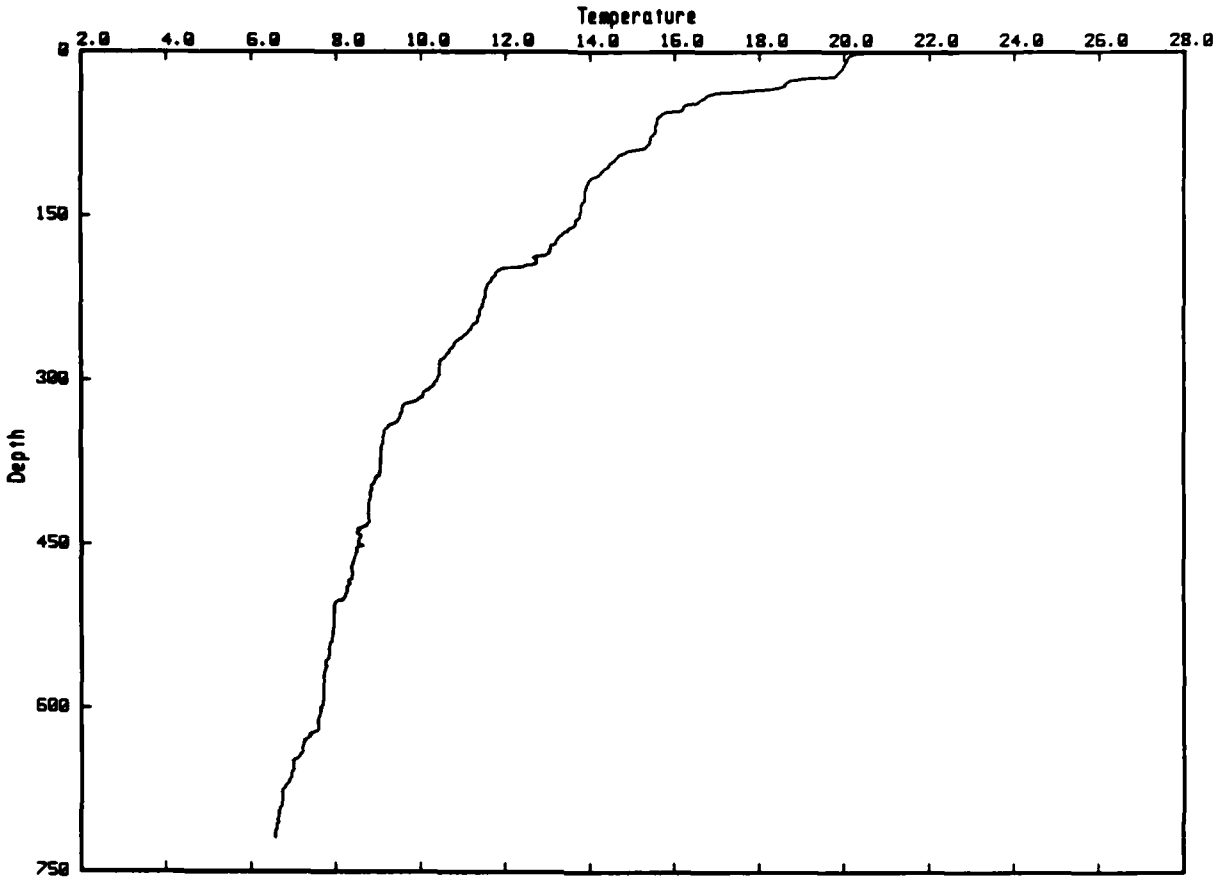
XBT DROP 024 28 13.6N 112 27.4W 20 NOV 84 1015 MST



XBT DROP 024 T-7 RADAR: none GULF COORDS: -35.9 194.6
JDAY 325 1715Z DEPTH 551m/551m SST 20.20 2M TEMPS: SAIL 20.16 XBT 20.22
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1A-5, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	20.0	200	12.7	390	9.1
20	20.0	210	12.4	400	8.9
30	19.9	220	12.0	410	8.9
40	19.1	230	12.0	420	8.8
50	18.9	240	11.1	430	8.7
60	17.8	250	10.5	440	8.7
70	17.3	260	10.4	450	8.3
80	16.0	270	10.3	460	8.1
90	15.7	280	10.3	470	8.0
100	15.5	290	10.2	480	8.0
110	15.5	300	10.2	490	7.9
120	15.5	310	10.2	500	7.9
130	15.4	320	10.1	510	7.9
140	15.3	330	9.9	520	7.8
150	14.2	340	9.9	530	7.8
160	14.0	350	9.9	540	7.8
170	13.8	360	9.7	550	7.8
180	13.3	370	9.5		
190	13.0	380	9.2		

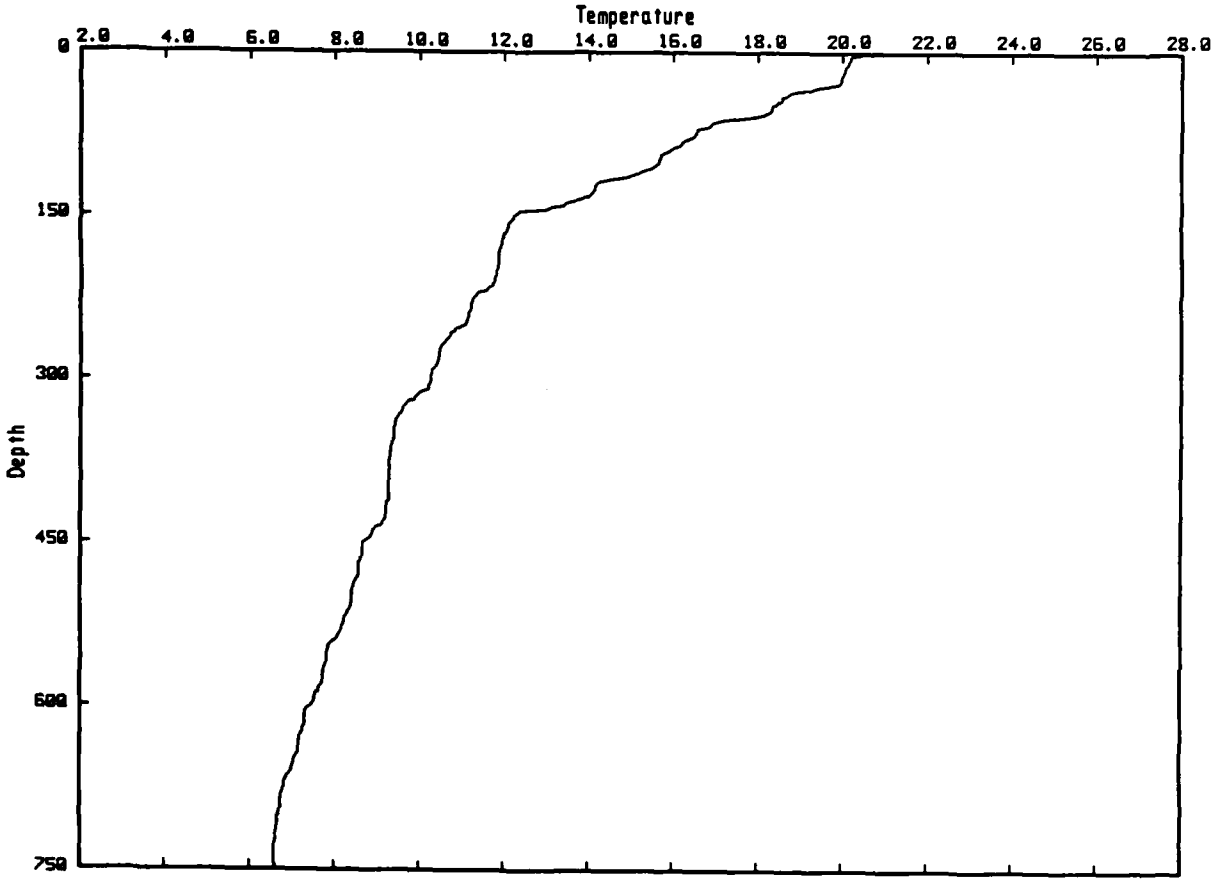
XBT DROP 025 28 14.8N 112 27.0W 20 NOV 84 1023 MST



XBT DROP 025 T-7 RADAR: none GULF COORDS: -34.1 196.0
JDAY 325 1723Z DEPTH 720m/720m SST 20.04 2M TEMPS: SAIL 20.14 XBT 20.27
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1A-6, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.0	200	11.8	390	8.9	580	7.7
20	19.8	210	11.6	400	8.8	590	7.7
30	18.6	220	11.5	410	8.8	600	7.6
40	16.8	230	11.5	420	8.8	610	7.6
50	16.2	240	11.4	430	8.8	620	7.6
60	15.6	250	11.2	440	8.5	630	7.2
70	15.6	260	11.0	450	8.6	640	7.2
80	15.4	270	10.8	460	8.5	650	7.0
90	15.1	280	10.5	470	8.4	660	6.9
100	14.6	290	10.4	480	8.4	670	6.8
110	14.3	300	10.4	490	8.3	680	6.7
120	14.0	310	10.1	500	8.2	690	6.7
130	13.9	320	9.8	510	8.0	700	6.7
140	13.8	330	9.5	520	8.0	710	6.6
150	13.8	340	9.3	530	7.9	720	6.6
160	13.6	350	9.1	540	7.9		
170	13.3	360	9.1	550	7.8		
180	13.1	370	9.1	560	7.7		
190	12.7	380	9.1	570	7.7		

XBT DROP 026 28 16.3N 112 26.6W 20 NOV 84 1031 MST



XBT DROP 026 T-7 RADAR: none GULF COORDS: -31.9 197.8
JDAY 325 1731Z DEPTH 840m/760m SST 20.25 2M TEMPS: SAIL 20.21 XBT 20.50
GULF OF CALIFORNIA: GUAYMAS BASIN, END MX1A LINE, MX1A-7, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.1	200	11.8	390	9.3	580	7.7
20	20.0	210	11.8	400	9.3	590	7.6
30	19.8	220	11.4	410	9.3	600	7.4
40	18.6	230	11.3	420	9.2	610	7.3
50	18.3	240	11.2	430	9.2	620	7.3
60	17.6	250	11.1	440	8.9	630	7.2
70	16.6	260	10.7	450	8.7	640	7.1
80	16.3	270	10.5	460	8.6	650	7.1
90	15.9	280	10.4	470	8.6	660	7.0
100	15.7	290	10.3	480	8.6	670	6.8
110	15.2	300	10.3	490	8.4	680	6.8
120	14.2	310	10.1	500	8.4	690	6.7
130	14.1	320	9.7	510	8.4	700	6.7
140	13.4	330	9.6	520	8.2	710	6.6
150	12.2	340	9.4	530	8.2	720	6.6
160	12.1	350	9.4	540	8.0	730	6.6
170	12.0	360	9.4	550	7.8	740	6.6
180	11.9	370	9.3	560	7.8	750	6.6
190	11.9	380	9.3	570	7.7	760	6.6

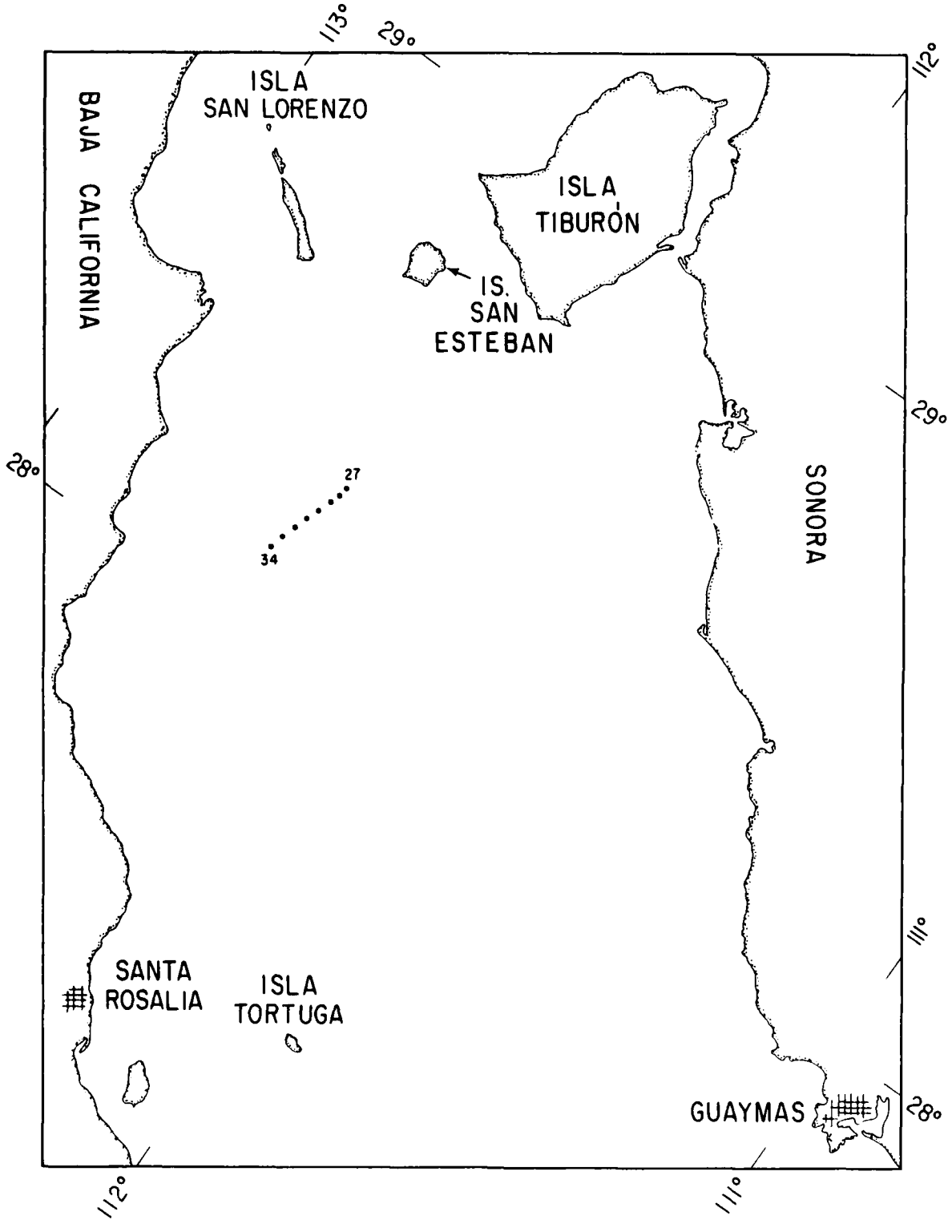
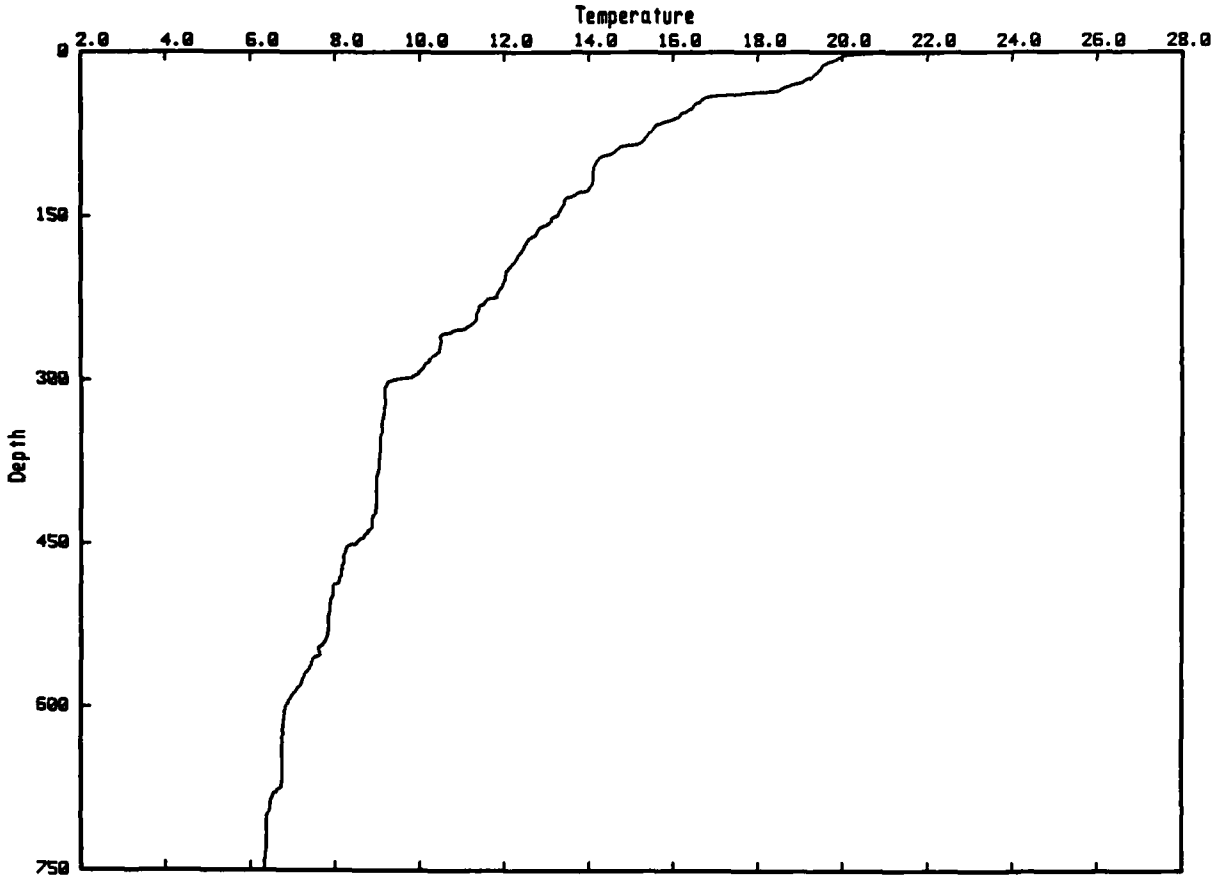


Figure 10. MX1B Section: XBT Station Locations

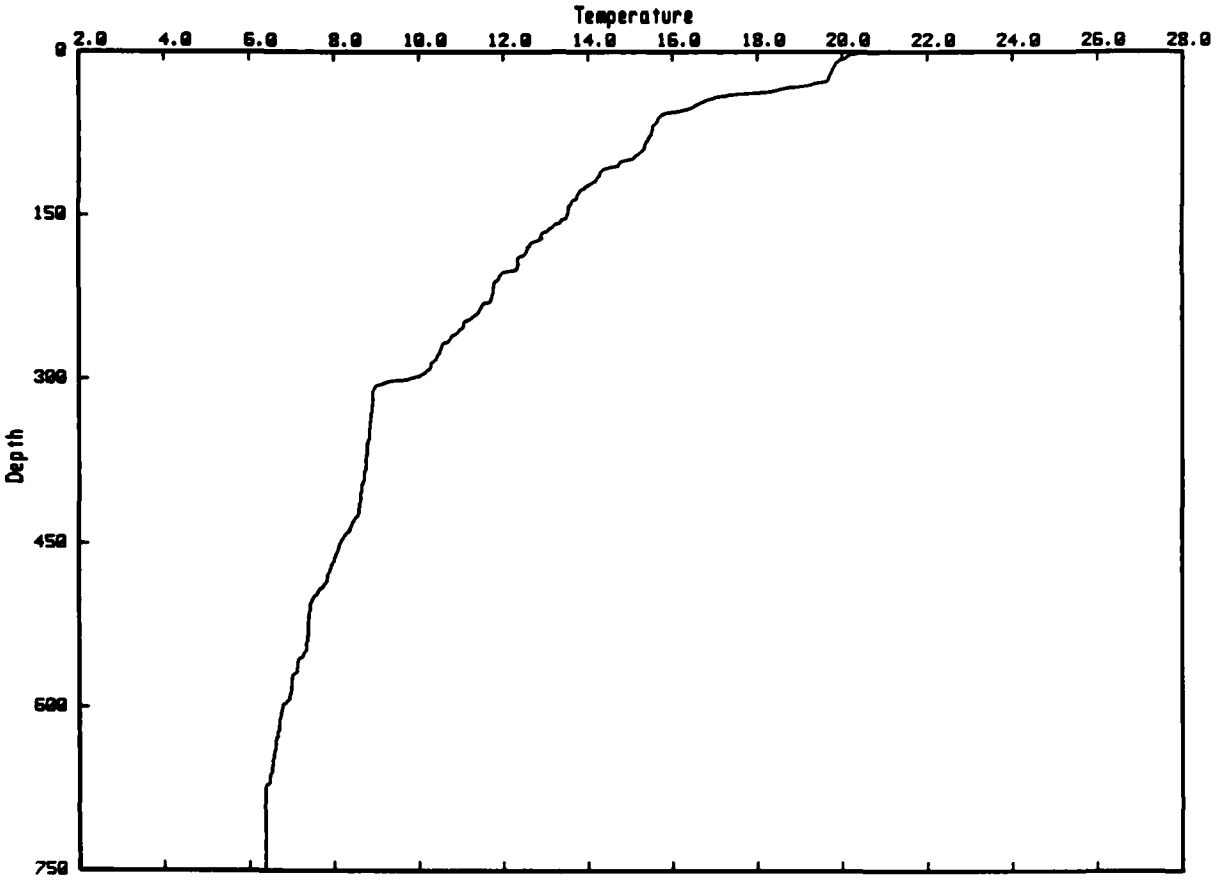
XBT DROP 027 28 16.9N 112 25.1W 20 NOV 84 1224 MST



XBT DROP 027 T-7 RADAR: none GULF COORDS: -29.2 197.3
JDAY 325 1924Z DEPTH 982m/760m SST 20.05 2M TEMPS: SAIL 20.16 XBT 20.49
GULF OF CALIFORNIA: GUAYMAS BASIN, BEGIN MX1B LINE; MX1B-1, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.7	200	12.0	390	9.0	580	7.2
20	19.4	210	12.0	400	9.0	590	7.0
30	18.8	220	11.8	410	9.0	600	6.8
40	16.9	230	11.5	420	8.9	610	6.8
50	16.5	240	11.3	430	8.9	620	6.8
60	16.1	250	11.2	440	8.8	630	6.8
70	15.5	260	10.5	450	8.5	640	6.8
80	15.3	270	10.5	460	8.2	650	6.8
90	14.7	280	10.2	470	8.2	660	6.7
100	14.2	290	10.0	480	8.1	670	6.7
110	14.1	300	9.4	490	8.0	680	6.5
120	14.1	310	9.2	500	7.9	690	6.5
130	13.7	320	9.2	510	7.9	700	6.4
140	13.4	330	9.1	520	7.8	710	6.4
150	13.2	340	9.1	530	7.8	720	6.4
160	12.8	350	9.1	540	7.8	730	6.4
170	12.6	360	9.1	550	7.6	740	6.3
180	12.4	370	9.0	560	7.4	750	6.3
190	12.3	380	9.0	570	7.3	760	6.3

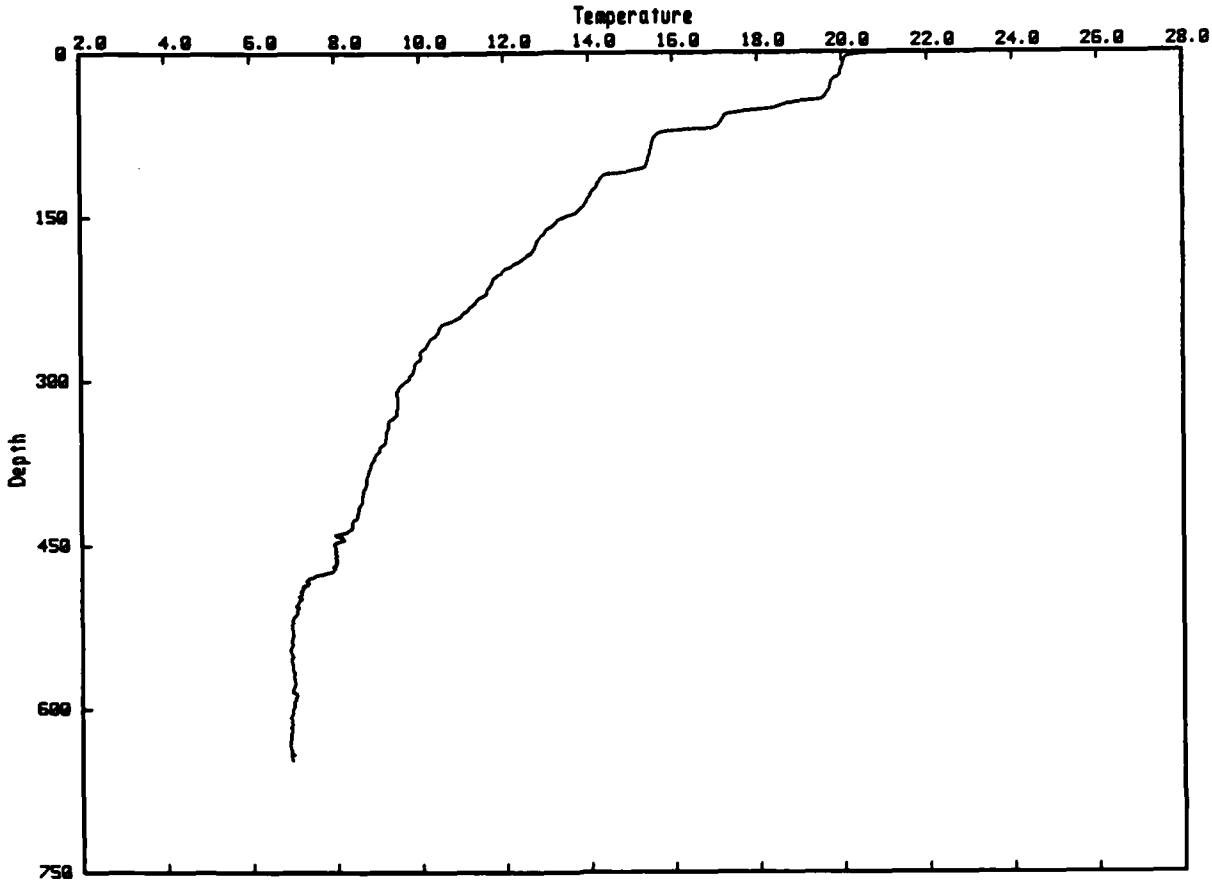
XBT DROP 028 28 15.9N 112 25.3W 20 NOV 84 1232 MST



XBT DROP 028 T-7 RADAR: none GULF COORDS: -30.6 196.0
JDAY 325 1932Z DEPTH 810m/760m SST 20.42 2M TEMPS: SAIL 20.28 XBT 20.38
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1B-2, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.9	200	12.3	390	8.7	580	7.0
20	19.7	210	11.9	400	8.7	590	7.0
30	19.3	220	11.8	410	8.6	600	6.8
40	17.3	230	11.7	420	8.6	610	6.7
50	16.5	240	11.4	430	8.5	620	6.7
60	15.7	250	11.1	440	8.3	630	6.6
70	15.5	260	10.8	450	8.1	640	6.6
80	15.4	270	10.6	460	8.1	650	6.6
90	15.3	280	10.4	470	7.9	660	6.5
100	14.9	290	10.3	480	7.9	670	6.5
110	14.3	300	9.8	490	7.7	680	6.4
120	14.1	310	8.9	500	7.5	690	6.4
130	13.8	320	8.9	510	7.4	700	6.4
140	13.6	330	8.9	520	7.4	710	6.4
150	13.5	340	8.9	530	7.4	720	6.4
160	13.2	350	8.8	540	7.4	730	6.4
170	12.9	360	8.8	550	7.3	740	6.4
180	12.6	370	8.8	560	7.1	750	6.4
190	12.4	380	8.8	570	7.0	760	6.4

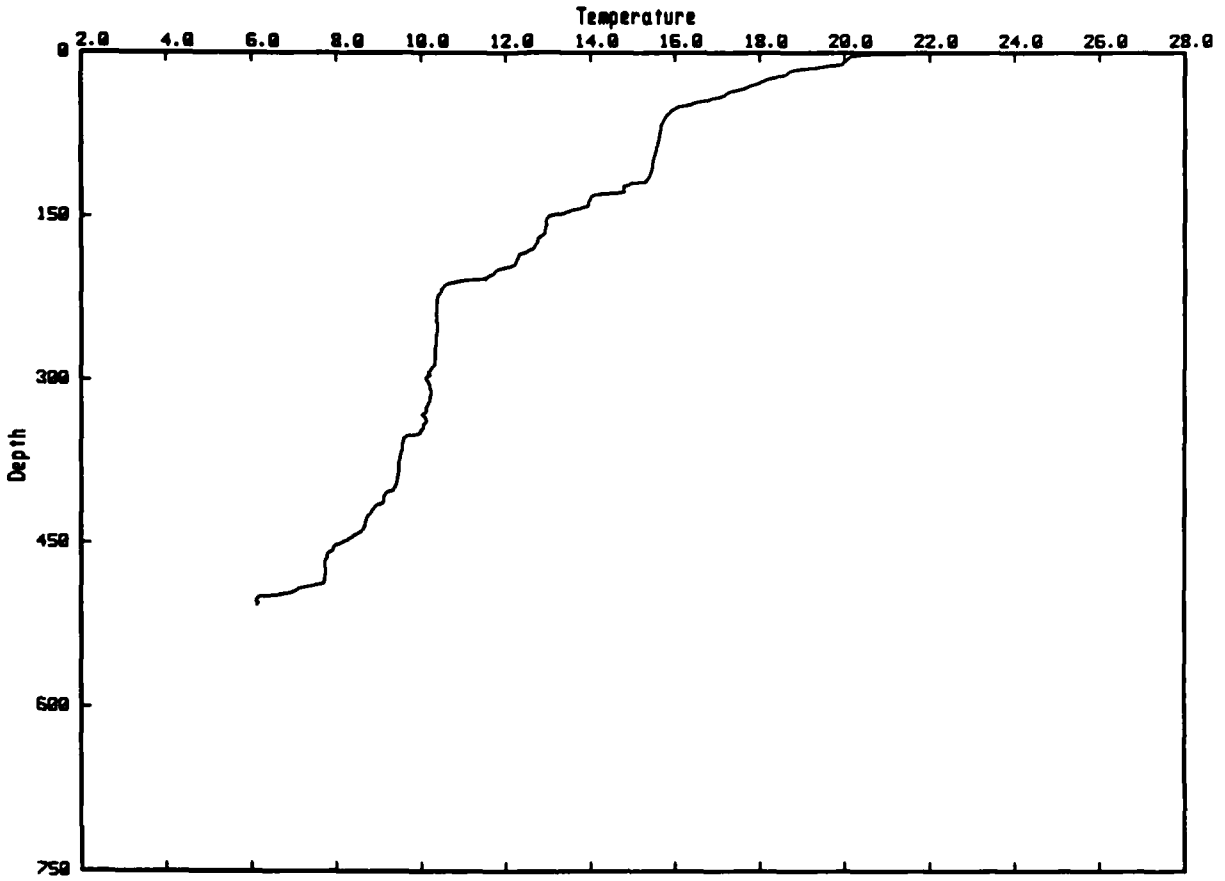
XBT DROP 029 28 14.8N 112 25.7W 20 NOV 84 1246 MST



XBT DROP 029 T-7 RADAR: none GULF COORDS: -32.3 194.7
JDAY 325 1946Z DEPTH 648m/648m SST 20.25 2M TEMPS: SAIL 20.18 XBT 20.43
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1B-3, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.0	200	12.0	390	8.7	580	7.0
20	20.0	210	11.7	400	8.6	590	7.0
30	19.7	220	11.6	410	8.6	600	7.0
40	19.6	230	11.3	420	8.5	610	6.9
50	18.5	240	11.0	430	8.4	620	6.9
60	17.2	250	10.5	440	8.0	630	6.9
70	16.7	260	10.3	450	8.0	640	6.9
80	15.5	270	10.1	460	8.0		
90	15.5	280	10.0	470	7.9		
100	15.4	290	9.8	480	7.3		
110	14.7	300	9.6	490	7.2		
120	14.2	310	9.4	500	7.2		
130	14.0	320	9.5	510	7.1		
140	13.9	330	9.5	520	7.0		
150	13.5	340	9.2	530	7.0		
160	13.1	350	9.2	540	6.9		
170	12.8	360	9.0	550	6.9		
180	12.7	370	8.9	560	6.9		
190	12.4	380	8.8	570	7.0		

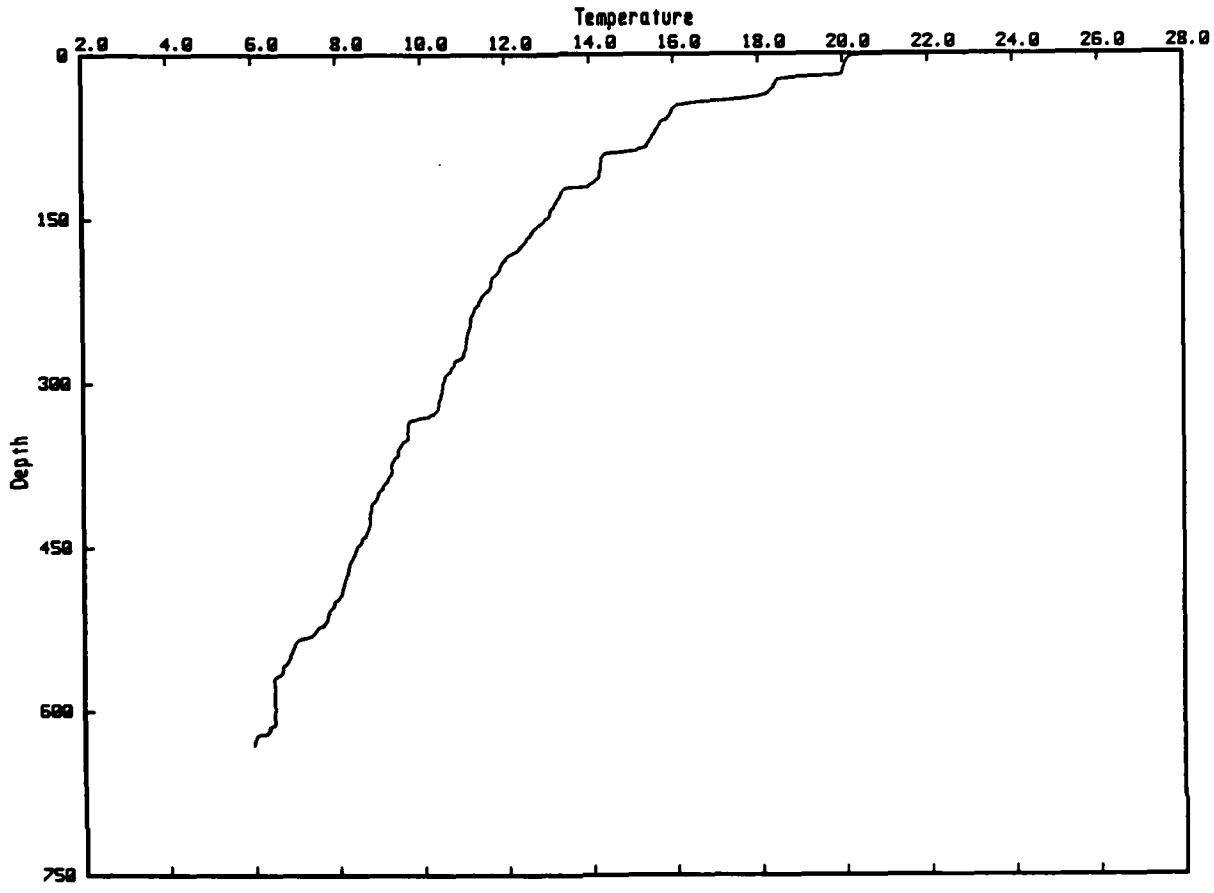
XBT DROP 030 28 13.2N 112 26.3W 20 NOV 84 1248 MST



XBT DROP 030 T-7 RADAR: none GULF COORDS: -34.9 192.9
JDAY 325 1948Z DEPTH 514m/508m SST 20.12 2M TEMPS: SAIL 20.26 XBT 20.43
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1B-4, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	20.0	200	11.8	390	9.5
20	18.6	210	10.8	400	9.4
30	17.8	220	10.5	410	9.1
40	17.1	230	10.4	420	8.8
50	16.1	240	10.4	430	8.7
60	15.8	250	10.4	440	8.6
70	15.7	260	10.4	450	8.1
80	15.6	270	10.3	460	7.8
90	15.6	280	10.3	470	7.7
100	15.5	290	10.3	480	7.7
110	15.4	300	10.1	490	7.3
120	15.0	310	10.2	500	6.2
130	14.1	320	10.2		
140	14.0	330	10.1		
150	13.0	340	10.1		
160	12.9	350	9.9		
170	12.8	360	9.6		
180	12.6	370	9.5		
190	12.3	380	9.5		

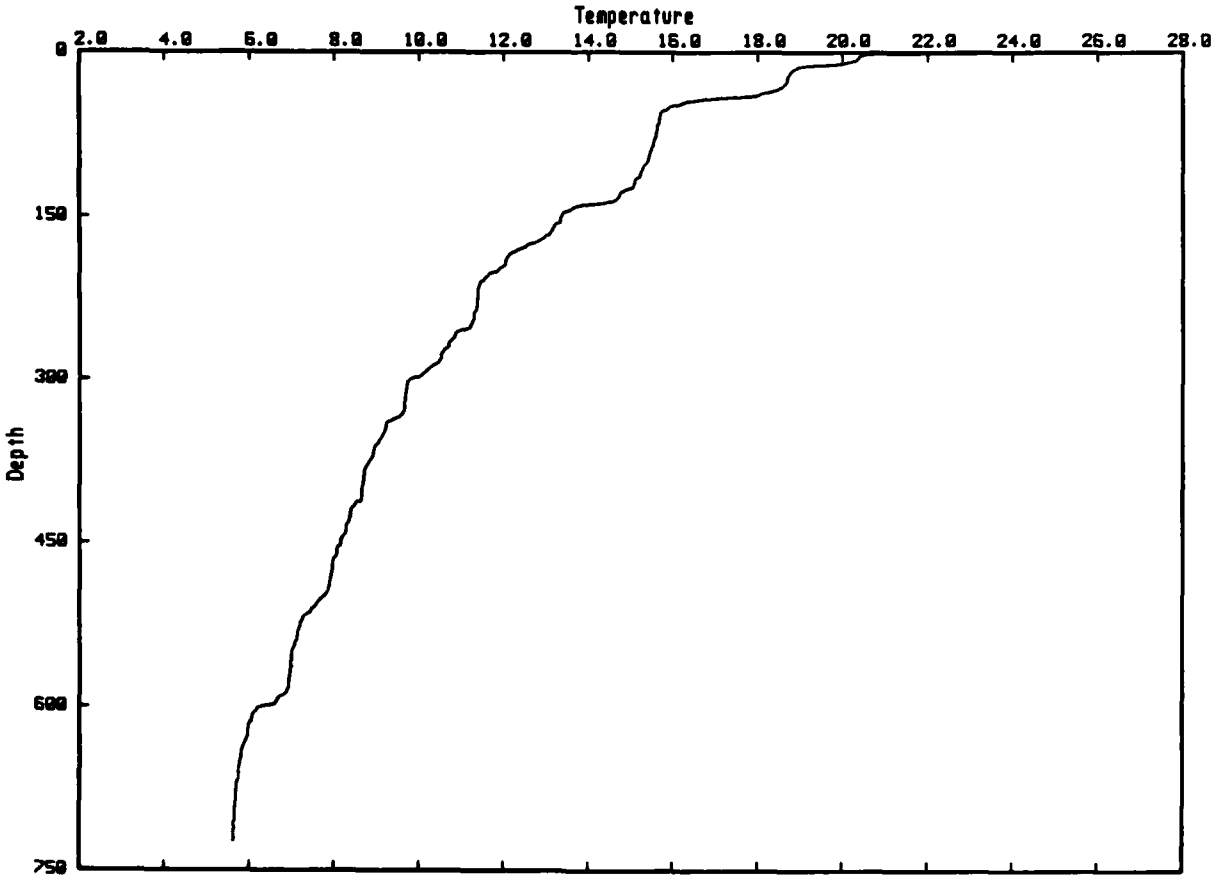
XBT DROP 031 28 11.7N 112 26.9W 20 NOV 84 1256 MST



XBT DROP 031 T-7 RADAR: none GULF COORDS: -37.3 191.3
JDAY 325 1956Z DEPTH 660m/632m SST 20.25 2M TEMPS: SAIL 20.31 XBT 20.24
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1B-5, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.1	200	11.8	390	9.2	580	6.5
20	19.7	210	11.6	400	9.0	590	6.5
30	18.4	220	11.4	410	8.8	600	6.5
40	17.8	230	11.3	420	8.8	610	6.5
50	16.0	240	11.2	430	8.7	620	6.3
60	15.8	250	11.1	440	8.6	630	6.0
70	15.6	260	11.1	450	8.4		
80	15.4	270	11.0	460	8.3		
90	14.8	280	10.8	470	8.2		
100	14.3	290	10.6	480	8.2		
110	14.3	300	10.5	490	8.1		
120	14.0	310	10.5	500	7.9		
130	13.3	320	10.4	510	7.8		
140	13.1	330	10.2	520	7.7		
150	13.0	340	9.7	530	7.4		
160	12.7	350	9.7	540	6.9		
170	12.5	360	9.4	550	6.9		
180	12.2	370	9.3	560	6.7		
190	11.9	380	9.3	570	6.5		

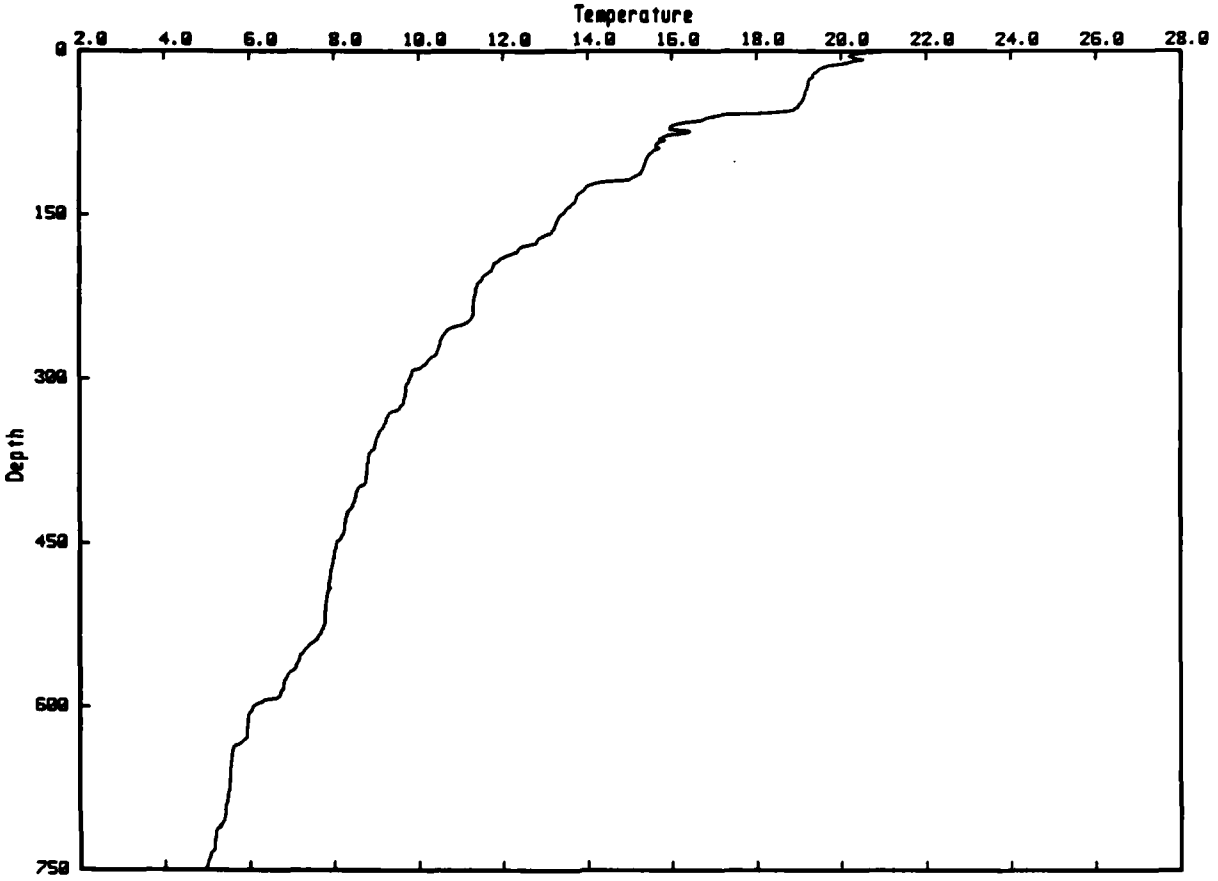
XBT DROP 032 28 10.2N 112 27.4W 20 NOV 84 1304 MST



XBT DROP 032 T-7 RADAR: none GULF COORDS: -39.6 189.5
JDAY 325 2004Z DEPTH 796m/725m SST 20.44 2M TEMPS: SAIL 20.44 XBT 20.58
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1B-6, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.1	200	11.8	390	8.7	580	6.9
20	18.8	210	11.4	400	8.7	590	6.8
30	18.6	220	11.4	410	8.6	600	6.3
40	17.9	230	11.4	420	8.4	610	6.1
50	15.9	240	11.3	430	8.4	620	6.0
60	15.7	250	11.2	440	8.3	630	5.9
70	15.6	260	10.8	450	8.2	640	5.8
80	15.6	270	10.7	460	8.0	650	5.8
90	15.5	280	10.5	470	8.0	660	5.7
100	15.4	290	10.2	480	7.9	670	5.7
110	15.3	300	9.8	490	7.9	680	5.7
120	15.1	310	9.7	500	7.7	690	5.7
130	14.7	320	9.7	510	7.5	700	5.7
140	13.8	330	9.6	520	7.3	710	5.6
150	13.4	340	9.2	530	7.2	720	5.6
160	13.2	350	9.2	540	7.1		
170	12.9	360	9.0	550	7.0		
180	12.4	370	8.9	560	7.0		
190	12.0	380	8.7	570	6.9		

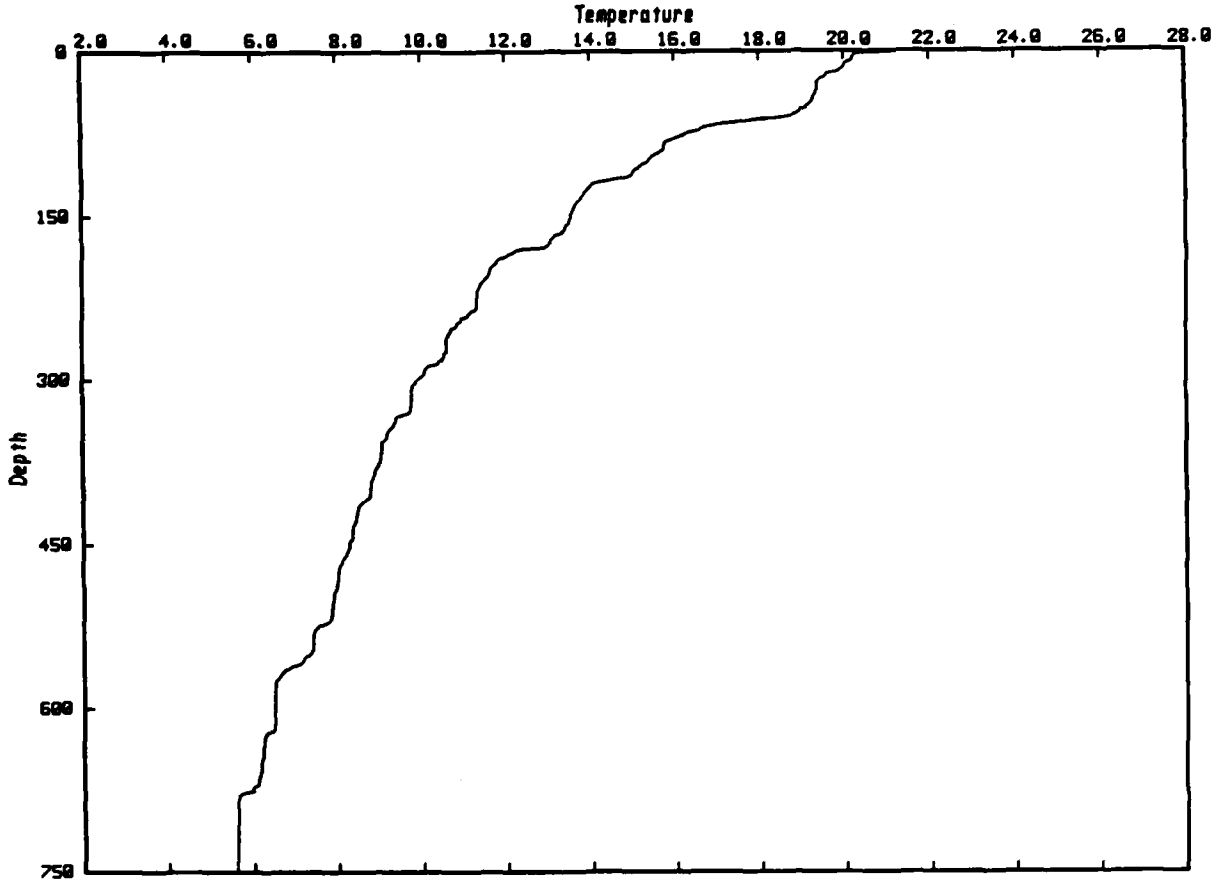
XBT DROP 033 28 8.6N 112 28.0W 20 NOV 84 1312 MST



XBT DROP 033 T-7 RADAR: none GULF COORDS: -42.2 187.7
JDAY 325 2012Z DEPTH 885m/760m SST 20.35 2M TEMPS: SAIL 20.42 XBT 20.56
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1B-7, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.3	200	11.7	390	8.8	580	6.8
20	19.4	210	11.5	400	8.6	590	6.7
30	19.2	220	11.4	410	8.5	600	6.1
40	19.1	230	11.3	420	8.4	610	6.0
50	19.0	240	11.3	430	8.3	620	5.9
60	17.0	250	11.1	440	8.2	630	5.9
70	16.0	260	10.6	450	8.1	640	5.6
80	15.7	270	10.5	460	8.0	650	5.6
90	15.7	280	10.3	470	8.0	660	5.6
100	15.4	290	10.1	480	7.9	670	5.5
110	15.3	300	9.8	490	7.9	680	5.5
120	14.5	310	9.7	500	7.8	690	5.5
130	13.9	320	9.7	510	7.8	700	5.4
140	13.7	330	9.3	520	7.8	710	5.3
150	13.4	340	9.2	530	7.7	720	5.2
160	13.3	350	9.1	540	7.5	730	5.2
170	12.9	360	9.0	550	7.3	740	5.0
180	12.4	370	8.8	560	7.1	750	5.0
190	12.0	380	8.8	570	6.9	760	4.9

XBT DROP 034 28 7.1N 112 28.4W 20 NOV 84 1320 MST



XBT DROP 034 T-7 RADAR: none GULF COORDS: -44.4 185.8
JDAY 325 2020Z DEPTH 910m/760m SST 20.27 2M TEMPS: SAIL 20.32 XBT 20.53
GULF OF CALIFORNIA: GUAYMAS BASIN, END MX1B LINE; MX1B-8, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.1	200	11.6	390	8.8	580	6.5
20	19.7	210	11.4	400	8.8	590	6.5
30	19.4	220	11.3	410	8.6	600	6.5
40	19.3	230	11.3	420	8.5	610	6.5
50	19.1	240	11.1	430	8.4	620	6.5
60	18.6	250	10.8	440	8.3	630	6.2
70	16.7	260	10.6	450	8.3	640	6.2
80	16.0	270	10.6	460	8.2	650	6.2
90	15.7	280	10.5	470	8.0	660	6.2
100	15.4	290	10.1	480	8.0	670	6.1
110	15.0	300	9.9	490	7.9	680	5.6
120	14.1	310	9.8	500	7.9	690	5.6
130	13.8	320	9.7	510	7.8	700	5.6
140	13.6	330	9.7	520	7.8	710	5.6
150	13.5	340	9.3	530	7.4	720	5.6
160	13.4	350	9.2	540	7.4	730	5.6
170	13.1	360	9.1	550	7.3	740	5.6
180	12.4	370	9.0	560	7.1	750	5.6
190	11.8	380	8.9	570	6.6	760	5.6

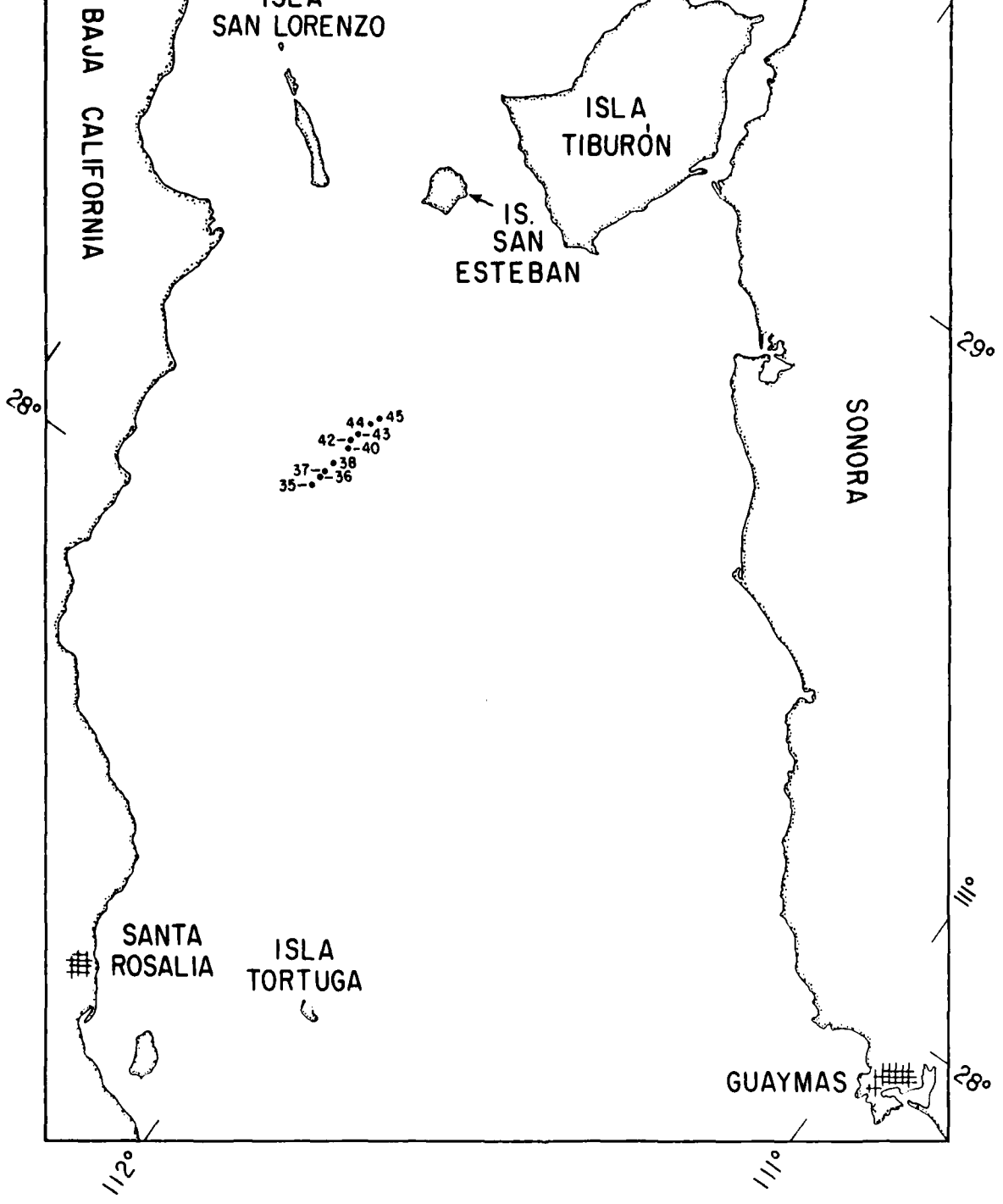
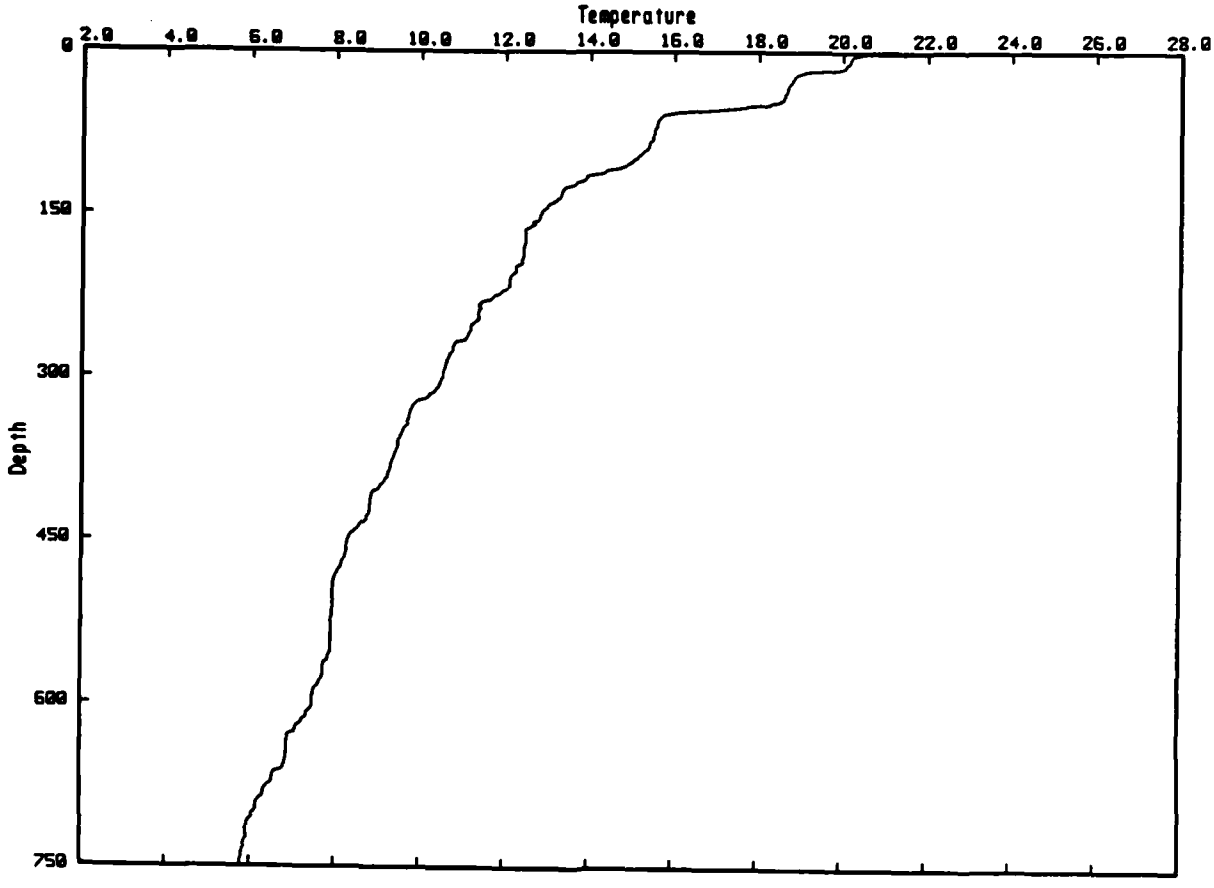


Figure 11. MX1C Section: XBT Station Locations

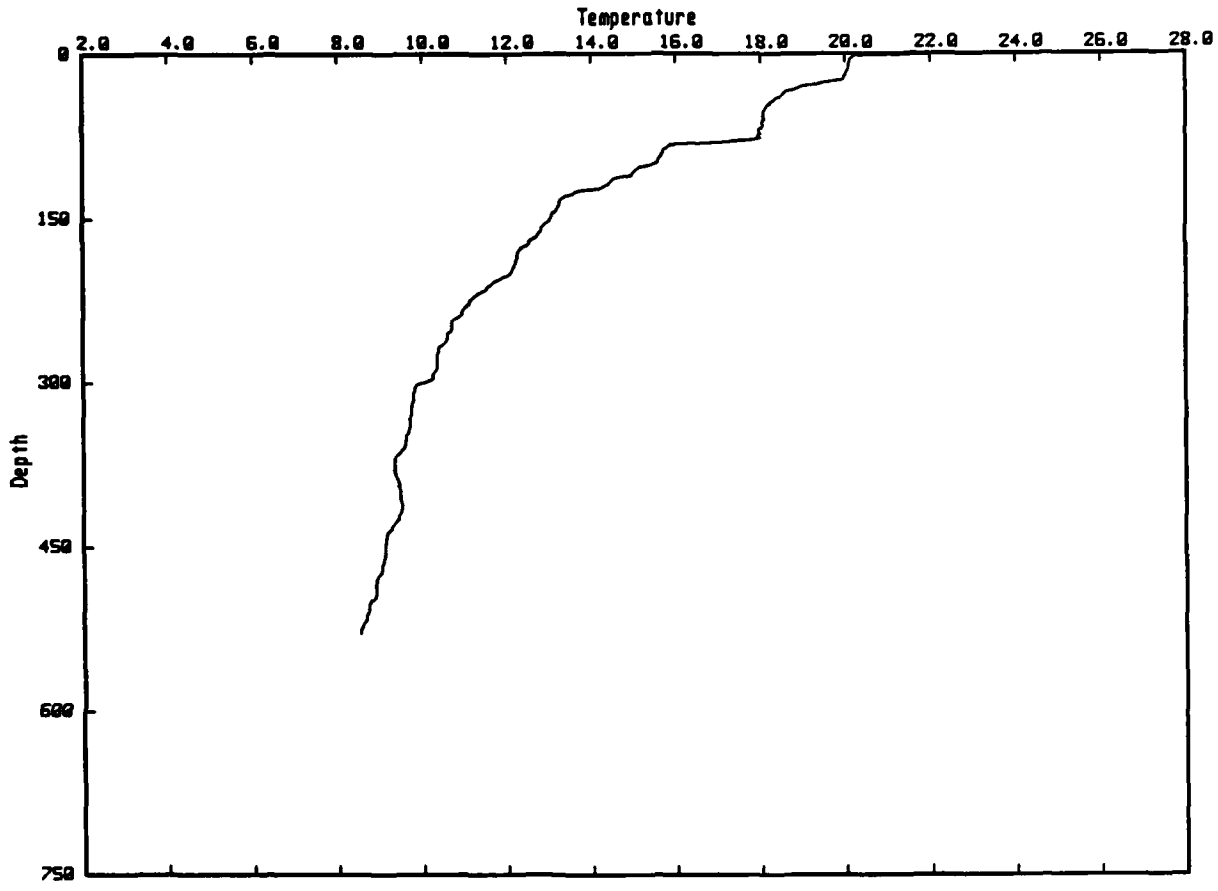
XBT DROP 035 28 9.4N 112 26.8W 20 NOV 84 1525 MST



XBT DROP 035 T-7 RADAR: none GULF COORDS: -39.7 187.7
JDAY 325 2225Z DEPTH 909m/760m SST 20.25 2M TEMPS: SAIL 20.34 XBT 20.44
GULF OF CALIFORNIA: GUAYMAS BASIN, BEGIN MX1C LINE; MX1C-1, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.1	200	12.2	390	9.2	580	7.7
20	18.9	210	12.1	400	9.1	590	7.5
30	18.7	220	11.9	410	8.9	600	7.5
40	18.6	230	11.5	420	8.8	610	7.4
50	17.7	240	11.4	430	8.7	620	7.1
60	15.7	250	11.3	440	8.5	630	6.9
70	15.5	260	11.1	450	8.3	640	6.9
80	15.5	270	10.8	460	8.3	650	6.9
90	15.4	280	10.7	470	8.2	660	6.8
100	15.0	290	10.6	480	8.0	670	6.6
110	14.4	300	10.5	490	8.0	680	6.3
120	13.7	310	10.4	500	7.9	690	6.2
130	13.3	320	10.1	510	8.0	700	6.1
140	13.1	330	9.8	520	7.9	710	5.9
150	12.8	340	9.7	530	7.9	720	5.9
160	12.6	350	9.6	540	7.9	730	5.9
170	12.5	360	9.5	550	7.9	740	5.8
180	12.4	370	9.4	560	7.8	750	5.8
190	12.4	380	9.3	570	7.7	760	5.7

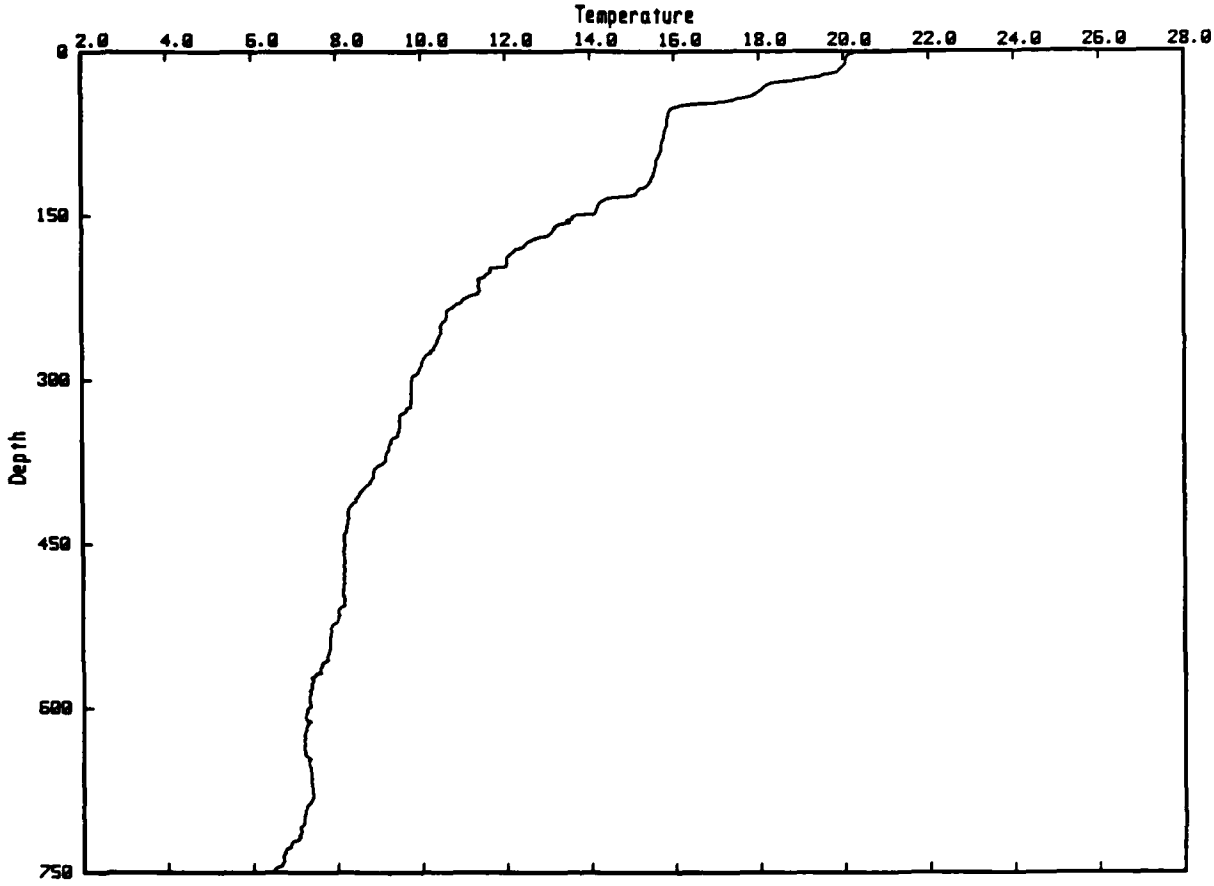
XBT DROP 036 28 10.6N 112 26.5W 20 NOV 84 1533 MST



XBT DROP 036 T-7 RADAR: none GULF COORDS: -38.0 189.2
JDAY 325 2233Z DEPTH 892m/530m SST 20.13 2M TEMPS: SAIL 20.17 XBT 20.25
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1C-2 (SHORTED AFTER 530 M)

Z	TEMP	Z	TEMP	Z	TEMP
10	20.1	200	12.1	390	9.4
20	20.0	210	11.6	400	9.5
30	19.0	220	11.3	410	9.5
40	18.4	230	11.0	420	9.5
50	18.1	240	10.9	430	9.3
60	18.1	250	10.7	440	9.2
70	18.0	260	10.6	450	9.1
80	17.0	270	10.4	460	9.1
90	15.7	280	10.3	470	9.0
100	15.5	290	10.3	480	8.9
110	15.0	300	10.0	490	8.9
120	14.4	310	9.8	500	8.7
130	13.4	320	9.7	510	8.7
140	13.2	330	9.7	520	8.6
150	13.0	340	9.7	530	8.5
160	12.8	350	9.6		
170	12.6	360	9.6		
180	12.3	370	9.3		
190	12.2	380	9.3		

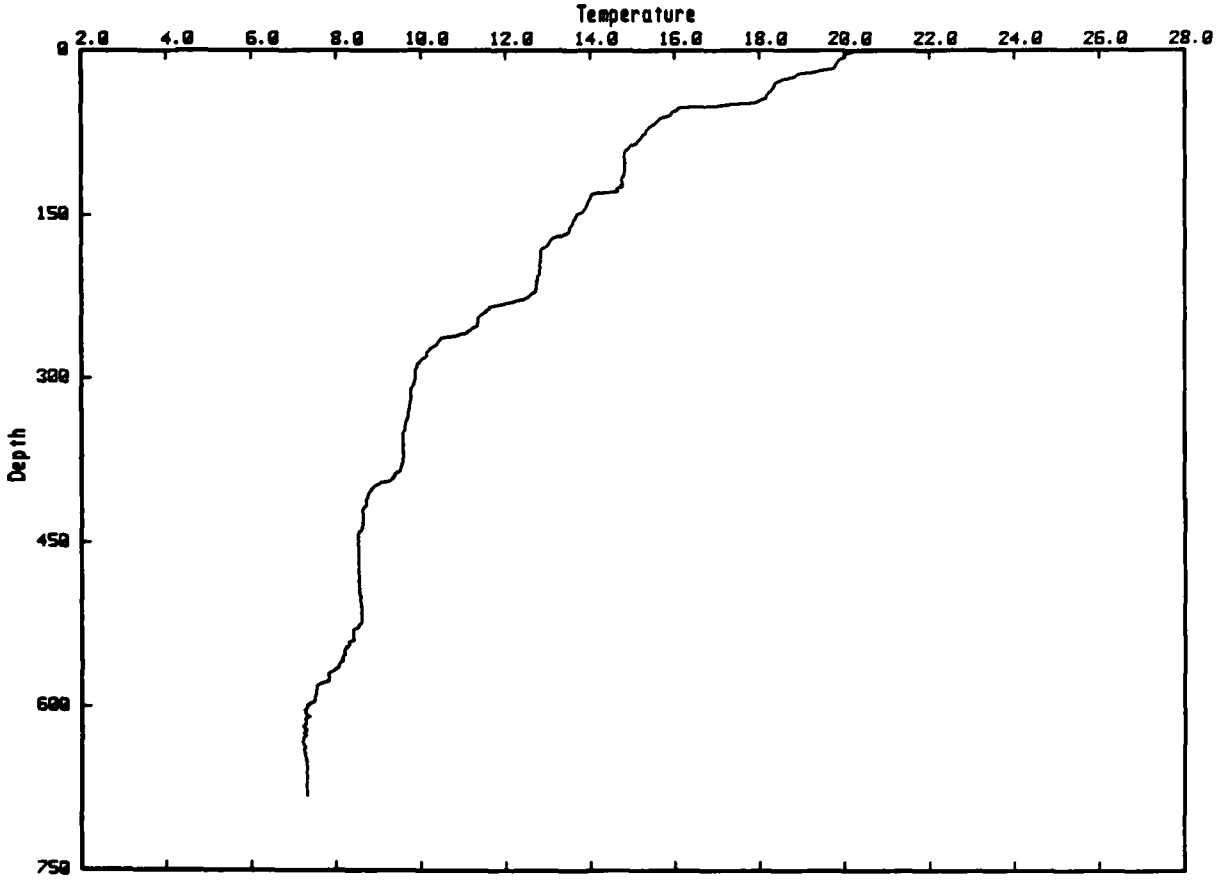
XBT DROP 037 28 11.3N 112 26.4W 20 NOV 84 1537 MST



XBT DROP 037 T-7 RADAR: none GULF COORDS: -37.1 190.2
JDAY 325 2237Z DEPTH 804m/760m SST 20.10 2M TEMPS: SAIL 20.21 XBT 20.26
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1C-3, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.1	200	11.6	390	8.8	580	7.4
20	19.8	210	11.4	400	8.6	590	7.3
30	18.3	220	11.4	410	8.4	600	7.3
40	17.9	230	11.0	420	8.3	610	7.2
50	16.2	240	10.6	430	8.3	620	7.2
60	15.9	250	10.5	440	8.2	630	7.2
70	15.8	260	10.4	450	8.2	640	7.2
80	15.7	270	10.3	460	8.2	650	7.3
90	15.7	280	10.0	470	8.1	660	7.4
100	15.6	290	10.0	480	8.2	670	7.4
110	15.5	300	9.8	490	8.1	680	7.4
120	15.4	310	9.8	500	8.2	690	7.3
130	15.1	320	9.8	510	8.0	700	7.2
140	14.2	330	9.6	520	8.0	710	7.1
150	14.1	340	9.5	530	7.9	720	7.0
160	13.2	350	9.5	540	7.8	730	6.7
170	12.8	360	9.2	550	7.8	740	6.7
180	12.4	370	9.2	560	7.6	750	6.5
190	12.0	380	8.9	570	7.4	760	6.4

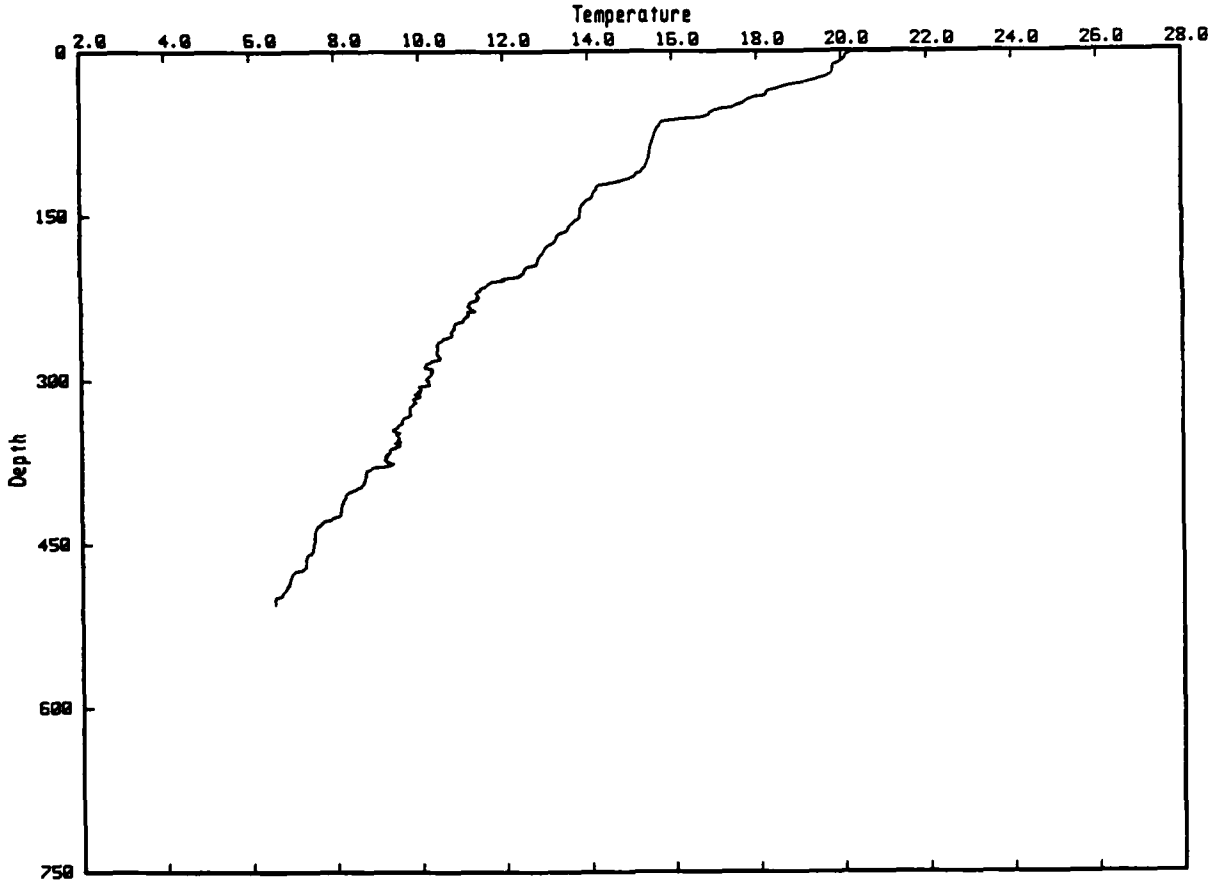
XBT DROP 038 28 12.6N 112 26.1W 20 NOV 84 1545 MST



XBT DROP 038 T-7 RADAR: none GULF COORDS: -35.3 191.8
JDAY 325 2245Z DEPTH 694m/682m SST 20.12 2M TEMPS: SAIL 20.17 XBT 20.22
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1C-4, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.9	200	12.8	390	9.4	580	7.6
20	19.3	210	12.7	400	8.9	590	7.5
30	18.4	220	12.7	410	8.7	600	7.3
40	18.2	230	12.2	420	8.6	610	7.3
50	17.2	240	11.5	430	8.6	620	7.3
60	15.8	250	11.3	440	8.5	630	7.2
70	15.4	260	11.0	450	8.5	640	7.2
80	15.2	270	10.3	460	8.5	650	7.3
90	14.9	280	10.1	470	8.5	660	7.3
100	14.8	290	9.9	480	8.5	670	7.3
110	14.8	300	9.9	490	8.5	680	7.3
120	14.8	310	9.8	500	8.6		
130	14.1	320	9.8	510	8.6		
140	13.9	330	9.7	520	8.6		
150	13.7	340	9.6	530	8.4		
160	13.5	350	9.6	540	8.3		
170	13.2	360	9.6	550	8.2		
180	12.9	370	9.6	560	8.1		
190	12.8	380	9.5	570	7.8		

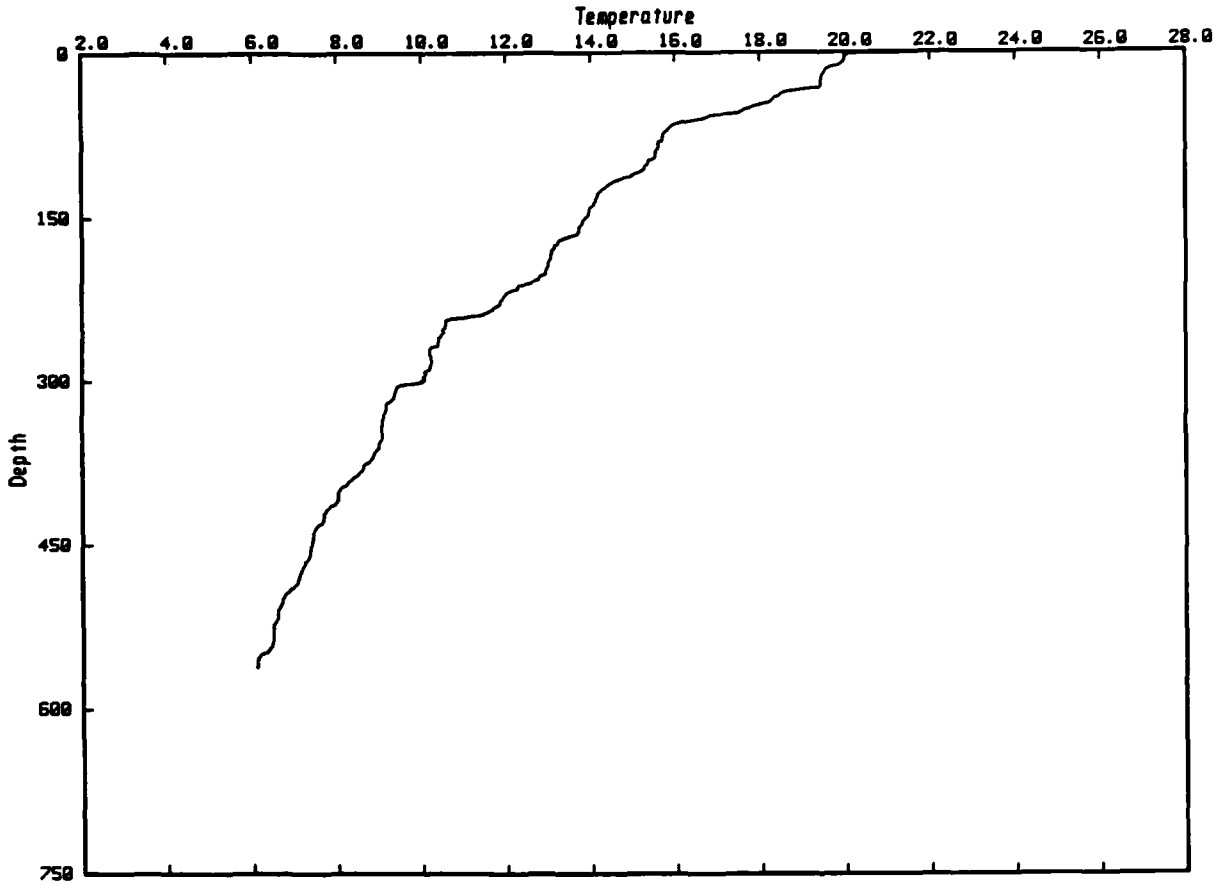
XBT DROP 040 28 14.6N 112 25.6W 20 NOV 84 1557 MST



XBT DROP 040 T-7 RADAR: none GULF COORDS: -32.4 194.3
JDAY 325 2257Z DEPTH 520m/506m SST 20.18 2M TEMPS: SAIL 20.11 XBT 20.23
GULF OF CALIFORNIA: GUAYMAS BASIN, OVER RIDGE; MX1C-5, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	20.0	200	12.5	390	8.7
20	19.8	210	11.7	400	8.5
30	18.9	220	11.3	410	8.2
40	18.2	230	11.2	420	8.1
50	17.5	240	11.1	430	7.7
60	16.7	250	10.8	440	7.5
70	15.7	260	10.8	450	7.5
80	15.5	270	10.4	460	7.3
90	15.5	280	10.4	470	7.3
100	15.4	290	10.3	480	6.9
110	15.3	300	10.2	490	6.8
120	14.7	310	9.9	500	6.6
130	14.1	320	9.9		
140	13.9	330	9.7		
150	13.8	340	9.5		
160	13.5	350	9.4		
170	13.3	360	9.5		
180	13.0	370	9.2		
190	12.8	380	8.9		

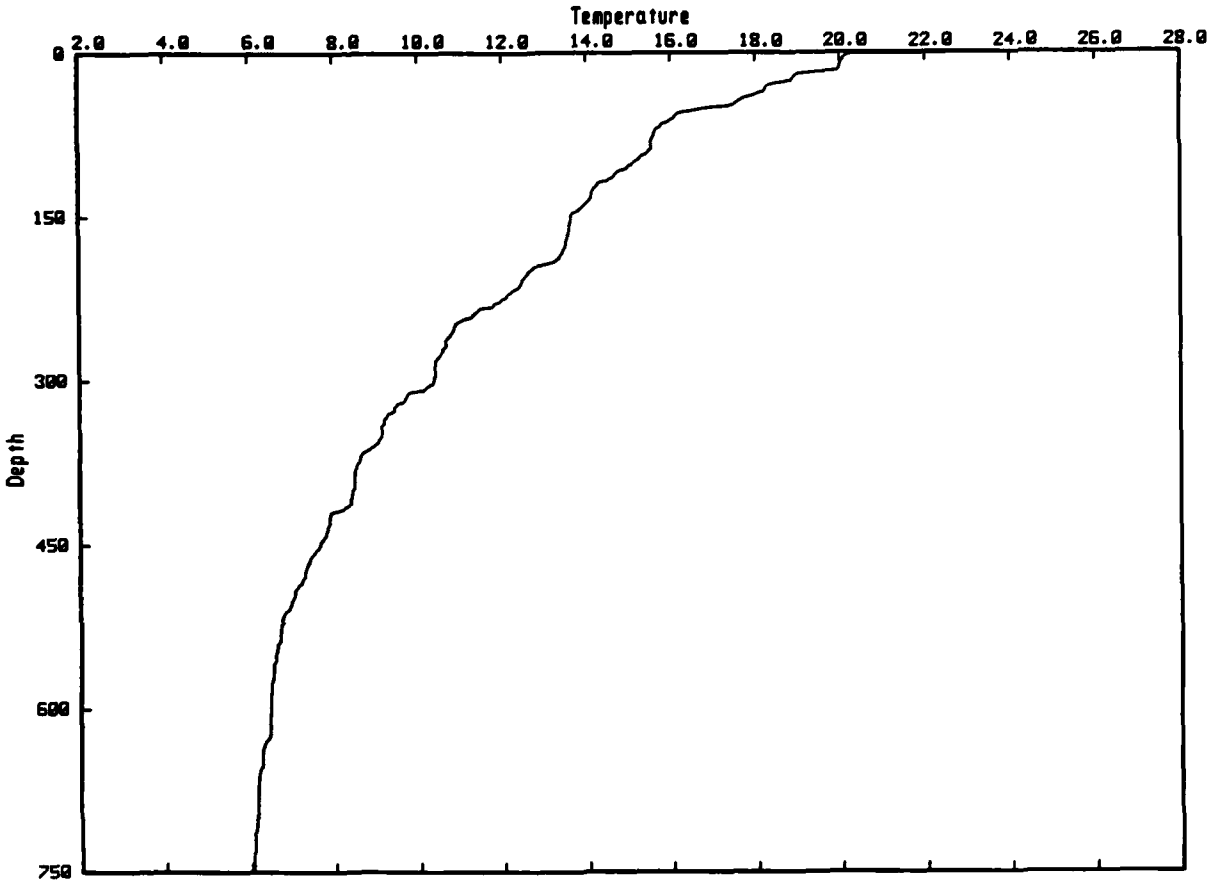
XBT DROP 042 28 15.4N 112 25.8W 20 NOV 84 1608 MST



XBT DROP 042 T-7 RADAR: none GULF COORDS: -31.8 195.7
JDAY 325 2308Z DEPTH 579m/562m SST 20.08 2M TEMPS: SAIL 20.24 XBT 20.10
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1C-6, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	19.9	200	12.9	390	8.3
20	19.5	210	12.6	400	8.0
30	19.4	220	12.0	410	8.0
40	18.5	230	11.8	420	7.7
50	17.8	240	11.3	430	7.6
60	16.7	250	10.6	440	7.4
70	15.8	260	10.4	450	7.4
80	15.7	270	10.2	460	7.3
90	15.5	280	10.2	470	7.2
100	15.4	290	10.1	480	7.1
110	15.0	300	10.0	490	6.9
120	14.5	310	9.4	500	6.7
130	14.2	320	9.2	510	6.6
140	14.0	330	9.1	520	6.5
150	13.9	340	9.1	530	6.5
160	13.7	350	9.1	540	6.5
170	13.3	360	9.0	550	6.2
180	13.1	370	8.8	560	6.1
190	13.0	380	8.6		

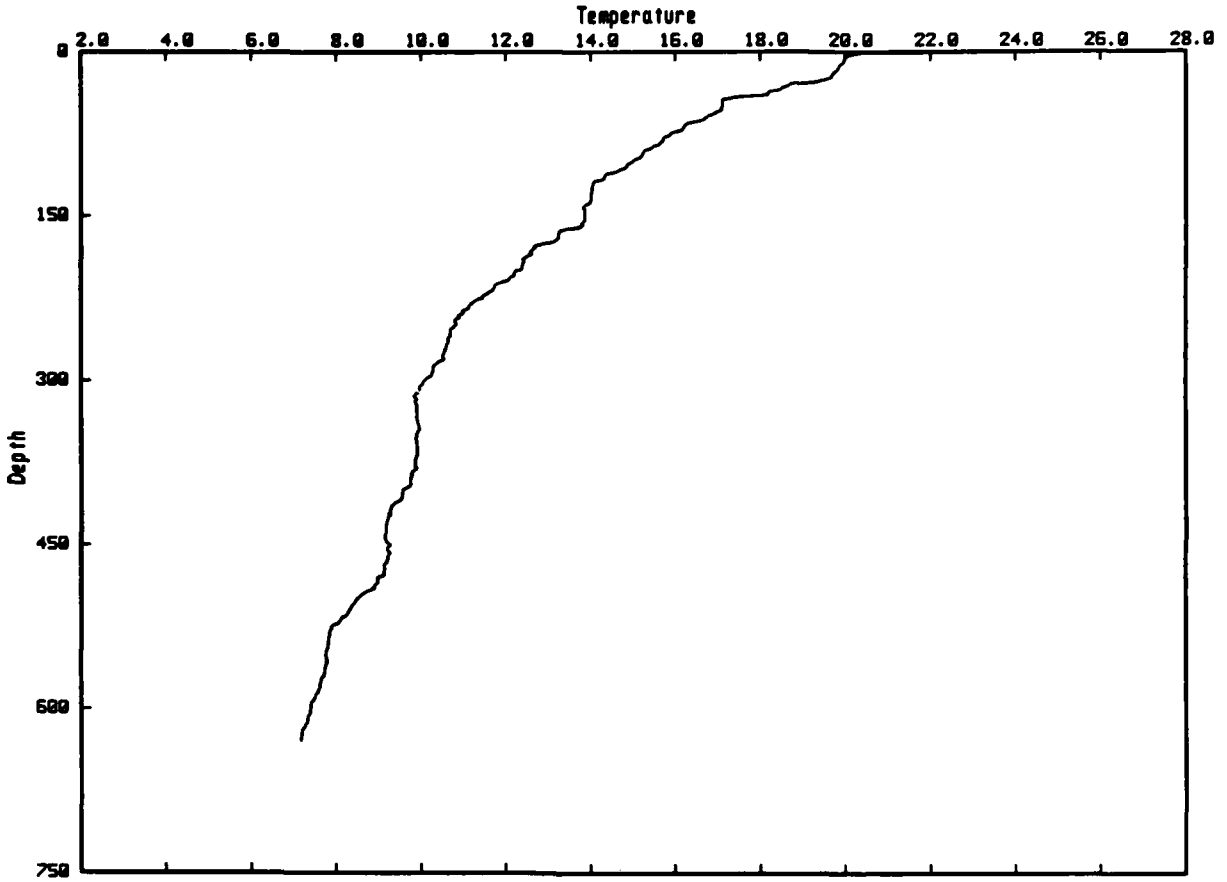
XBT DROP 043 28 16.4N 112 25.5W 20 NOV 84 1616 MST



XBT DROP 043 T-7 RADAR: none GULF COORDS: -30.3 196.9
JDAY 325 2316Z DEPTH 767m/750m SST 20.11 2M TEMPS: SAIL 20.16 XBT 20.28
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1C-7, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.0	200	12.6	390	8.5	580	6.5
20	19.0	210	12.4	400	8.4	590	6.5
30	18.4	220	12.2	410	8.4	600	6.5
40	17.9	230	11.8	420	8.0	610	6.5
50	17.1	240	11.3	430	7.9	620	6.5
60	16.1	250	10.9	440	7.8	630	6.4
70	15.7	260	10.8	450	7.6	640	6.3
80	15.6	270	10.6	460	7.5	650	6.3
90	15.5	280	10.5	470	7.3	660	6.2
100	15.2	290	10.4	480	7.3	670	6.2
110	14.7	300	10.4	490	7.1	680	6.2
120	14.3	310	9.8	500	7.0	690	6.2
130	14.1	320	9.6	510	6.9	700	6.1
140	13.9	330	9.3	520	6.8	710	6.1
150	13.6	340	9.2	530	6.7	720	6.1
160	13.6	350	9.1	540	6.6	730	6.1
170	13.5	360	8.9	550	6.6	740	6.0
180	13.5	370	8.6	560	6.5	750	6.0
190	13.3	380	8.5	570	6.5		

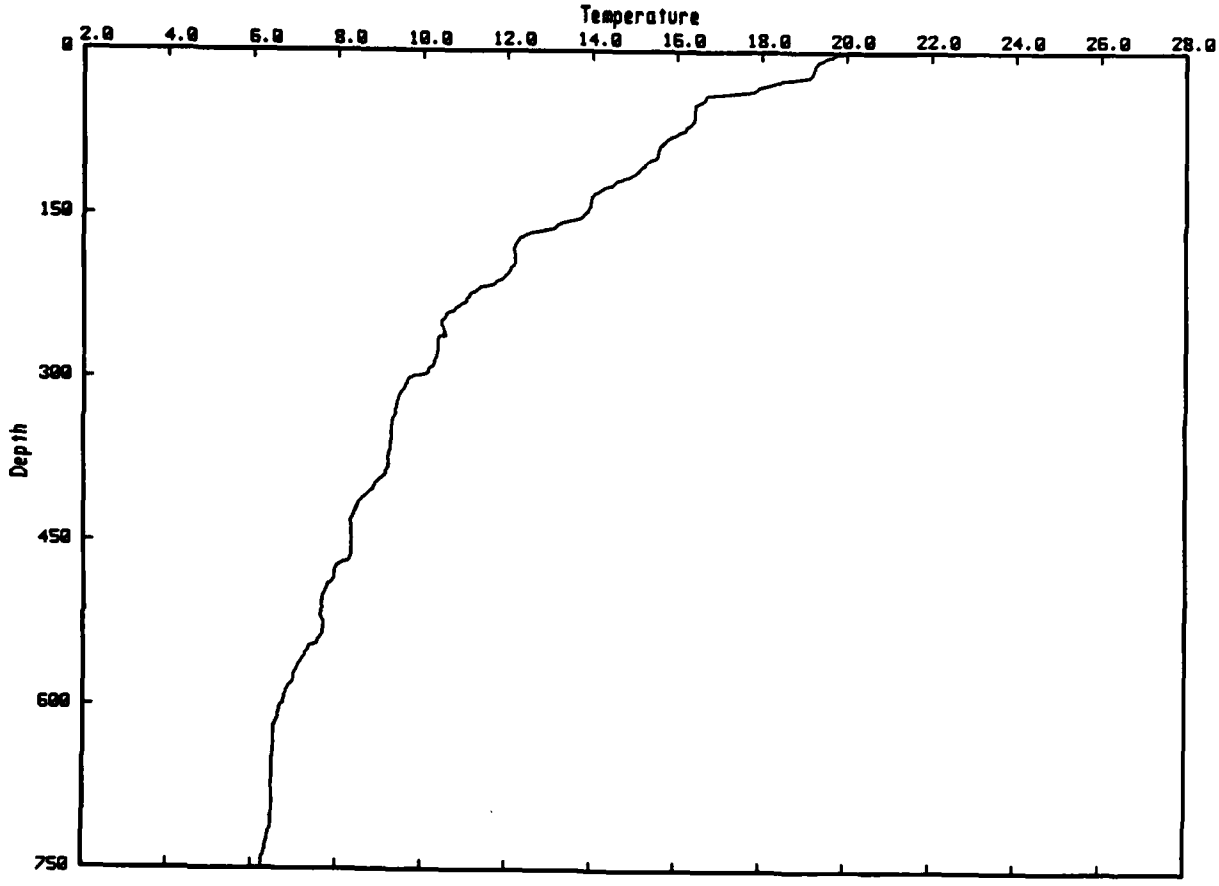
XBT DROP 044 28 18.0N 112 25.0W 20 NOV 84 1624 MST



XBT DROP 044 T-7 RADAR: none GULF COORDS: -27.9 198.8
JDAY 325 2324Z DEPTH 900m/630m SST 19.70 2M TEMPS: SAIL 20.17 XBT 20.33
GULF OF CALIFORNIA: GUAYMAS BASIN, MX1C-8, SPRING TIDE (SHORTED AFTER 630 M)

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.0	200	12.2	400	9.6	590	7.5
20	19.7	210	11.9	410	9.5	600	7.4
30	18.7	220	11.6	420	9.3	610	7.3
40	18.0	230	11.2	430	9.2	620	7.2
50	17.1	240	10.9	440	9.2	630	7.2
60	16.7	250	10.8	450	9.3		
70	16.2	260	10.7	460	9.2		
80	15.7	270	10.6	470	9.1		
90	15.3	280	10.5	480	9.0		
100	15.0	290	10.3	490	8.9		
110	14.6	300	10.1	500	8.5		
120	14.1	320	9.9	510	8.3		
130	14.0	330	9.9	520	8.1		
140	13.9	340	9.9	530	7.8		
150	13.9	350	9.9	540	7.8		
160	13.7	360	9.9	550	7.8		
170	13.2	370	9.9	560	7.8		
180	12.7	380	9.9	570	7.7		
190	12.4	390	9.7	580	7.6		

XBT DROP 045 28 19.0N 112 24.5W 20 NOV 84 1629 MST



XBT DROP 045 T-7 RADAR: none GULF COORDS: -26.1 199.8
JDAY 325 2329Z DEPTH 1010m/760m SST 19.78 2M TEMPS: SAIL 19.97 XBT 19.76
GULF OF CALIFORNIA: GUAYMAS BASIN, END MX1C LINE; MX1C-9, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.3	200	12.1	390	9.1	580	6.9
20	19.2	210	11.8	400	8.8	590	6.8
30	18.3	220	11.2	410	8.6	600	6.6
40	16.7	230	11.0	420	8.4	610	6.6
50	16.4	240	10.6	430	8.3	620	6.5
60	16.4	250	10.4	440	8.3	630	6.5
70	16.2	260	10.5	450	8.3	640	6.5
80	15.8	270	10.4	460	8.3	650	6.5
90	15.6	280	10.3	470	8.1	660	6.5
100	15.4	290	10.2	480	7.9	670	6.5
110	15.1	300	9.7	490	7.7	680	6.5
120	14.5	310	9.5	500	7.6	690	6.5
130	14.1	320	9.4	510	7.6	700	6.5
140	13.9	330	9.3	520	7.6	710	6.5
150	13.8	340	9.3	530	7.7	720	6.4
160	13.1	350	9.3	540	7.5	730	6.3
170	12.3	360	9.2	550	7.3	740	6.3
180	12.2	370	9.2	560	7.1	750	6.3
190	12.2	380	9.2	570	7.0	760	6.3

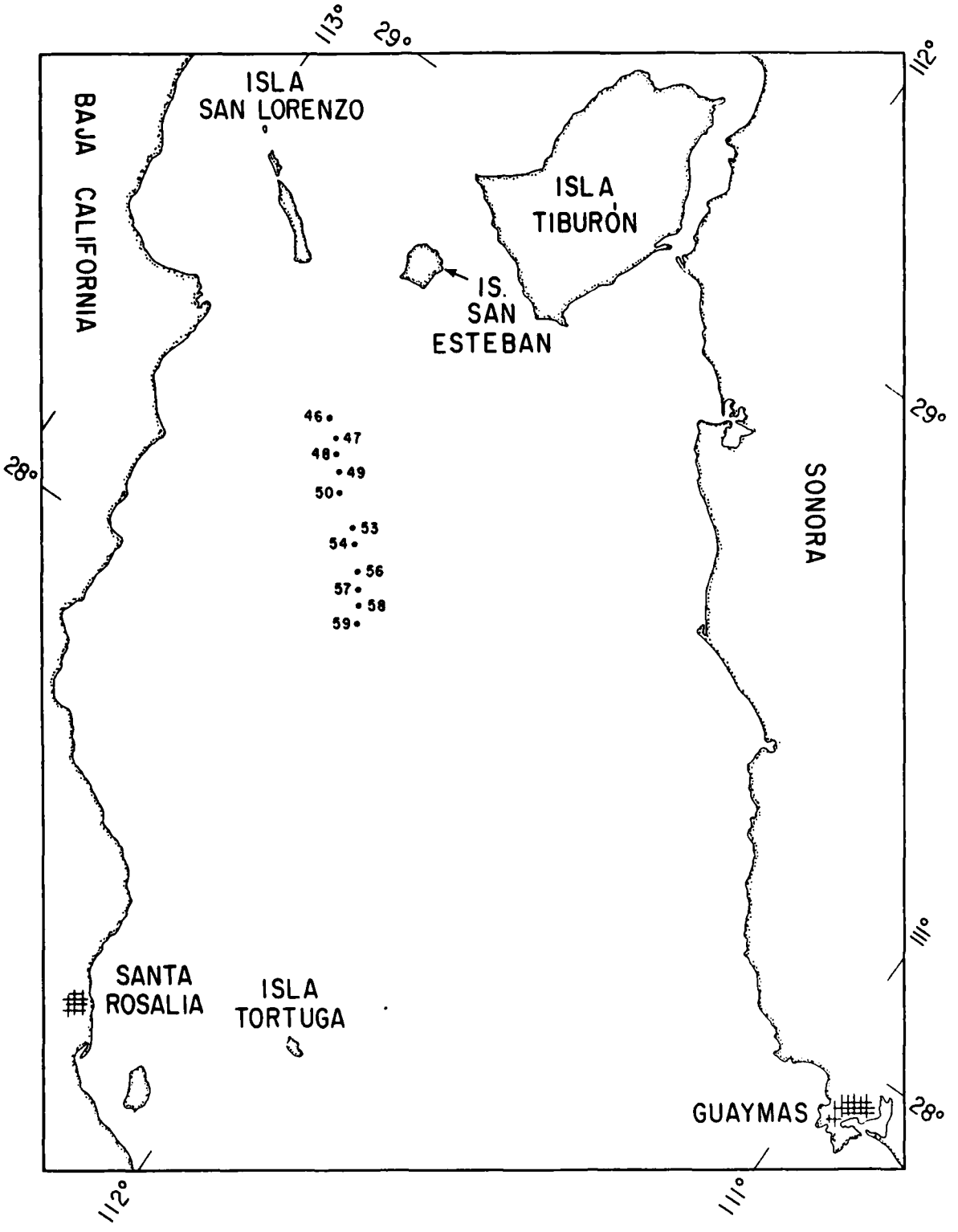
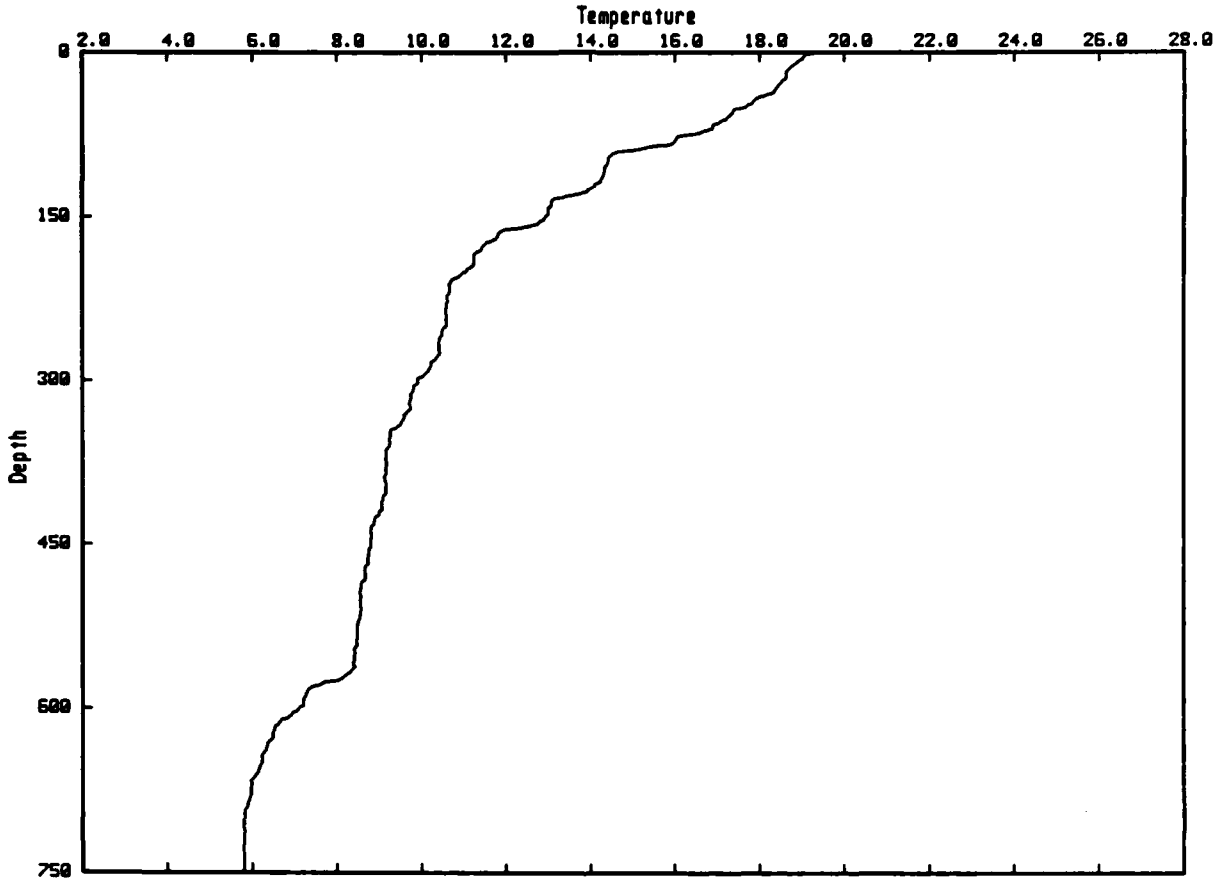


Figure 12. MX2A Section: XBT Station Locations

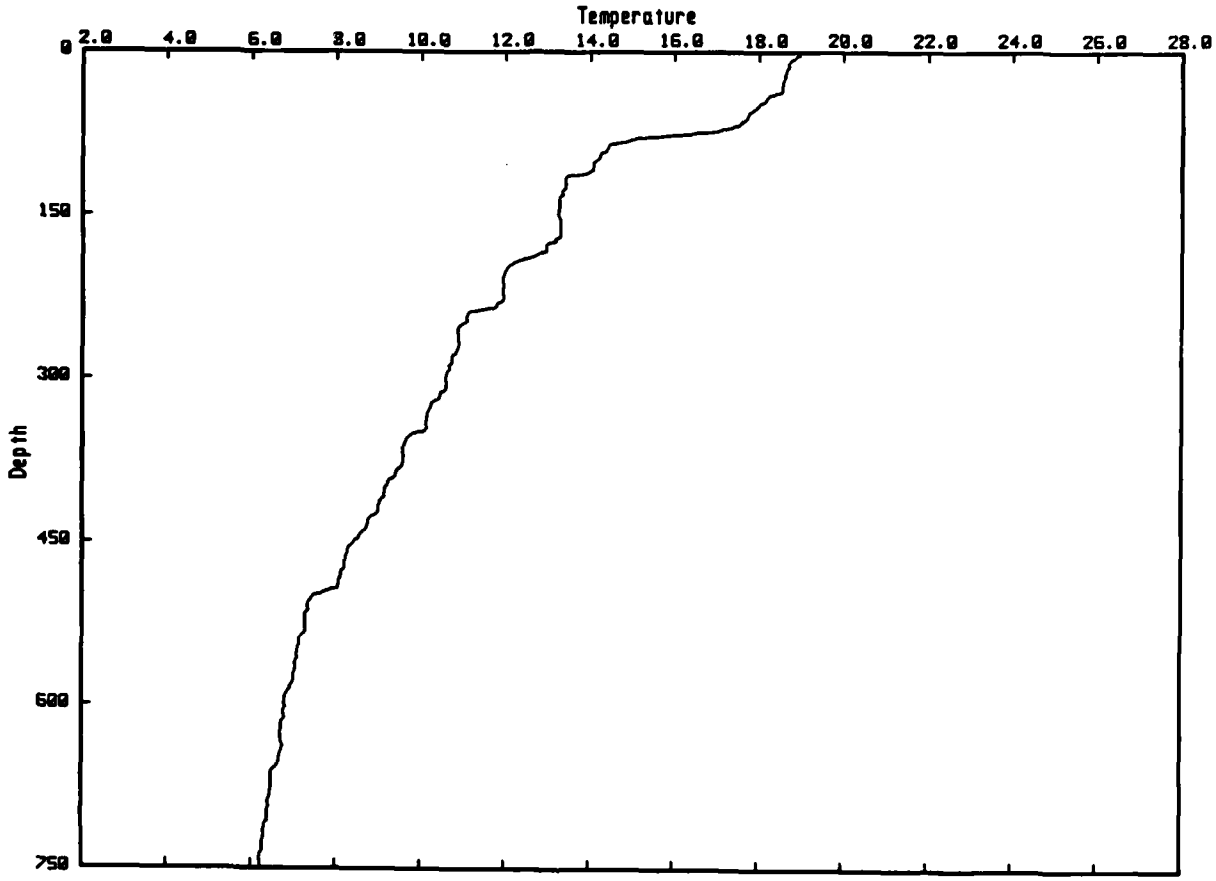
XBT DROP 046 28 23.0N 112 32.0W 21 NOV 84 0818 MST



XBT DROP 046 T-7 RADAR: none GULF COORDS: -31.7 213.0
JDAY 326 1518Z DEPTH 787m/760m SST 19.05 2M TEMPS: SAIL 19.14 XBT 19.04
GULF OF CALIFORNIA: GUAYMAS BASIN, BEGIN MX2A LINE; MX2A-1, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	18.9	200	11.1	388	9.1	580	7.5
20	18.6	210	10.7	400	9.1	590	7.2
30	18.4	220	10.6	409	9.1	600	7.1
40	18.0	230	10.6	420	9.0	610	6.7
50	17.6	240	10.6	431	8.9	620	6.5
60	17.2	250	10.6	439	8.8	630	6.4
70	16.8	259	10.4	450	8.8	640	6.3
80	16.0	270	10.4	460	8.8	650	6.2
90	14.7	280	10.3	470	8.7	660	6.1
100	14.4	290	10.2	480	8.7	670	6.0
110	14.3	300	9.9	490	8.6	679	6.0
120	14.1	310	9.8	501	8.6	690	5.9
130	13.7	320	9.7	511	8.6	700	5.8
140	13.1	330	9.6	519	8.5	710	5.8
150	12.9	340	9.5	531	8.5	720	5.8
160	12.4	350	9.3	540	8.5	730	5.8
170	11.8	360	9.2	551	8.4	741	5.8
180	11.4	370	9.2	559	8.4	750	5.8
190	11.2	380	9.2	570	8.2	759	5.8

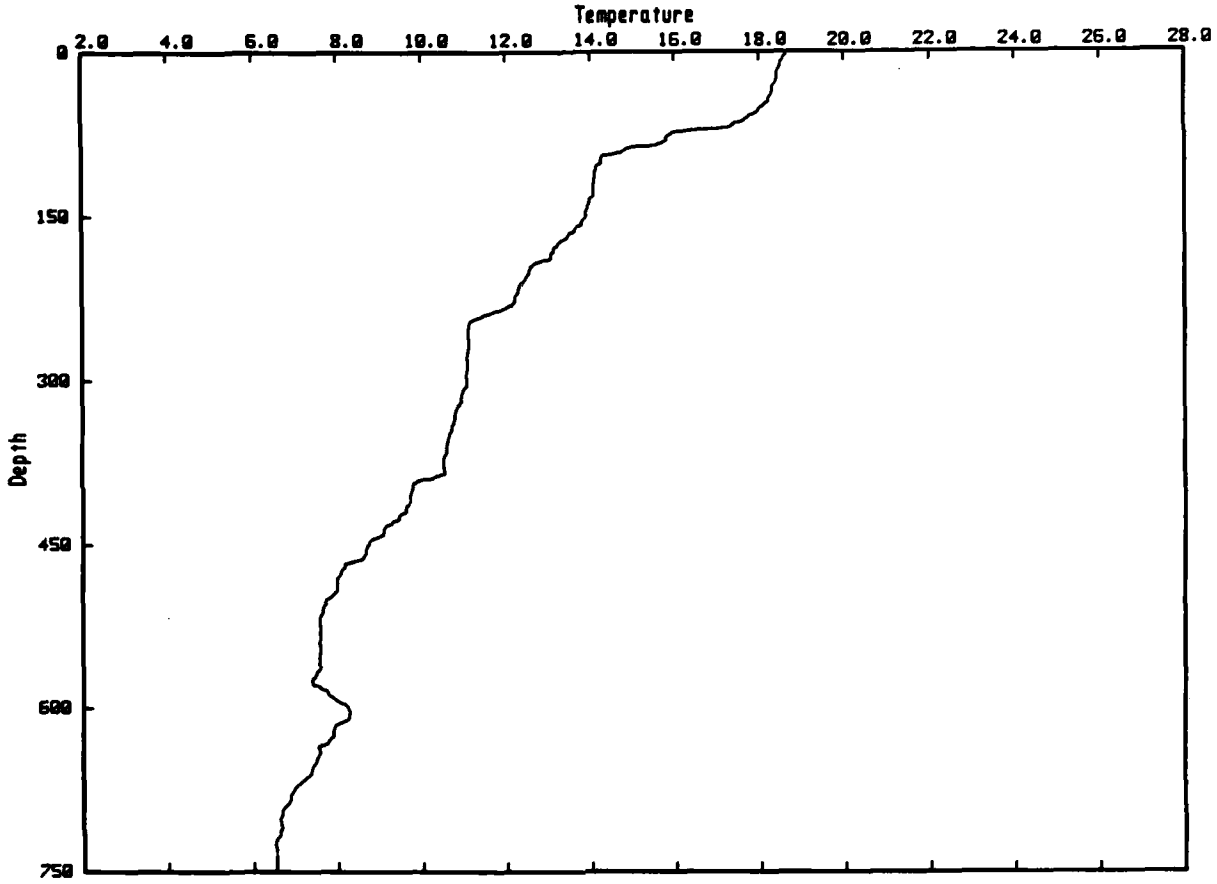
XBT DROP 047 28 21.5N 112 29.8W 21 NOV 84 0830 MST



XBT DROP 047 T-7 RADAR: none GULF COORDS: -30.4 208.7
JDAY 326 1530Z DEPTH 874m/760m SST 18.90 2M TEMPS: SAIL 18.91 XBT 18.88
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2A-2, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	18.7	200	12.0	390	9.4	580	7.0
20	18.6	210	11.9	400	9.2	590	6.8
30	18.6	219	12.0	410	9.1	600	6.8
40	18.2	230	11.8	421	9.0	610	6.8
50	18.0	239	11.1	429	8.8	620	6.7
60	17.7	250	11.0	440	8.6	630	6.7
70	17.3	260	10.9	450	8.4	640	6.7
80	15.0	271	10.9	460	8.3	650	6.7
90	14.4	279	10.7	469	8.2	659	6.5
100	14.1	290	10.7	480	8.1	670	6.5
110	14.0	300	10.6	489	8.1	680	6.5
120	13.4	310	10.6	500	7.4	689	6.4
130	13.4	320	10.3	510	7.3	699	6.4
140	13.3	329	10.2	520	7.3	710	6.3
150	13.3	340	10.1	530	7.3	721	6.3
160	13.3	350	9.8	540	7.1	730	6.3
170	13.3	360	9.6	550	7.1	739	6.2
180	13.0	370	9.6	560	7.0	750	6.2
190	12.4	380	9.5	570	7.0	759	6.2

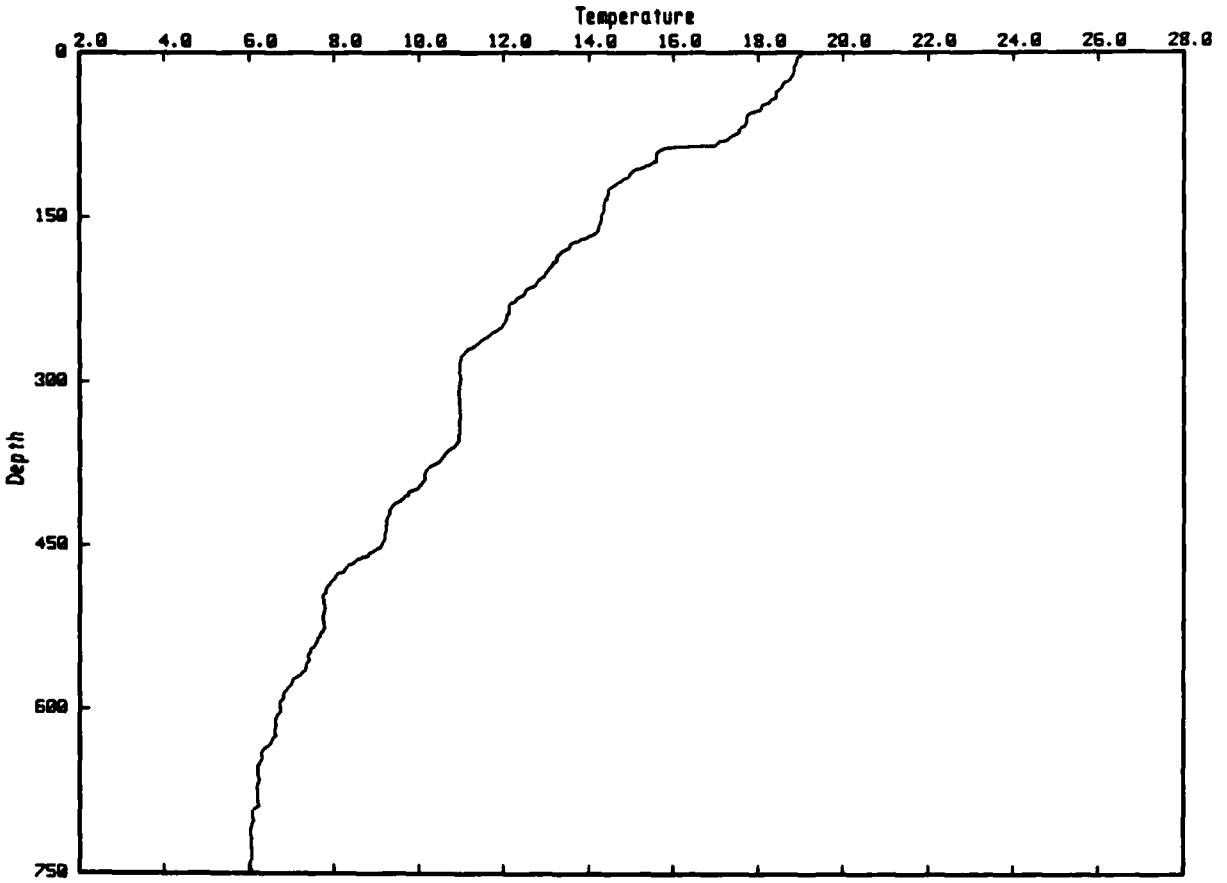
XBT DROP 048 28 20.2N 112 28.6W 21 NOV 84 0842 MST



XBT DROP 048 T-7 RADAR: none GULF COORDS: -30.3 205.6
JDAY 326 1542Z DEPTH 904m/752m SST 18.60 2M TEMPS: SAIL 18.58 XBT 18.60
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2A-3, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	18.5	200	12.5	390	10.0	580	7.5
20	18.4	210	12.4	400	9.8	590	7.9
30	18.4	220	12.3	410	9.7	600	8.2
40	18.3	230	12.2	420	9.6	610	8.2
50	18.1	240	11.4	430	9.3	620	7.9
60	17.7	250	11.1	440	9.1	630	7.8
70	17.1	259	11.1	450	8.7	641	7.6
80	15.8	271	11.1	460	8.6	650	7.5
90	14.8	280	11.1	470	8.2	660	7.4
100	14.2	291	11.1	480	8.0	670	7.1
111	14.1	299	11.1	489	8.0	681	6.9
121	14.1	310	11.0	500	7.7	690	6.8
130	14.1	320	10.9	510	7.6	700	6.7
140	13.9	329	10.8	521	7.6	710	6.7
150	13.9	341	10.7	530	7.6	720	6.5
160	13.7	350	10.6	540	7.6	731	6.5
170	13.4	359	10.6	550	7.6	738	6.5
180	13.1	371	10.5	560	7.6	749	6.5
190	12.9	381	10.5	570	7.5		

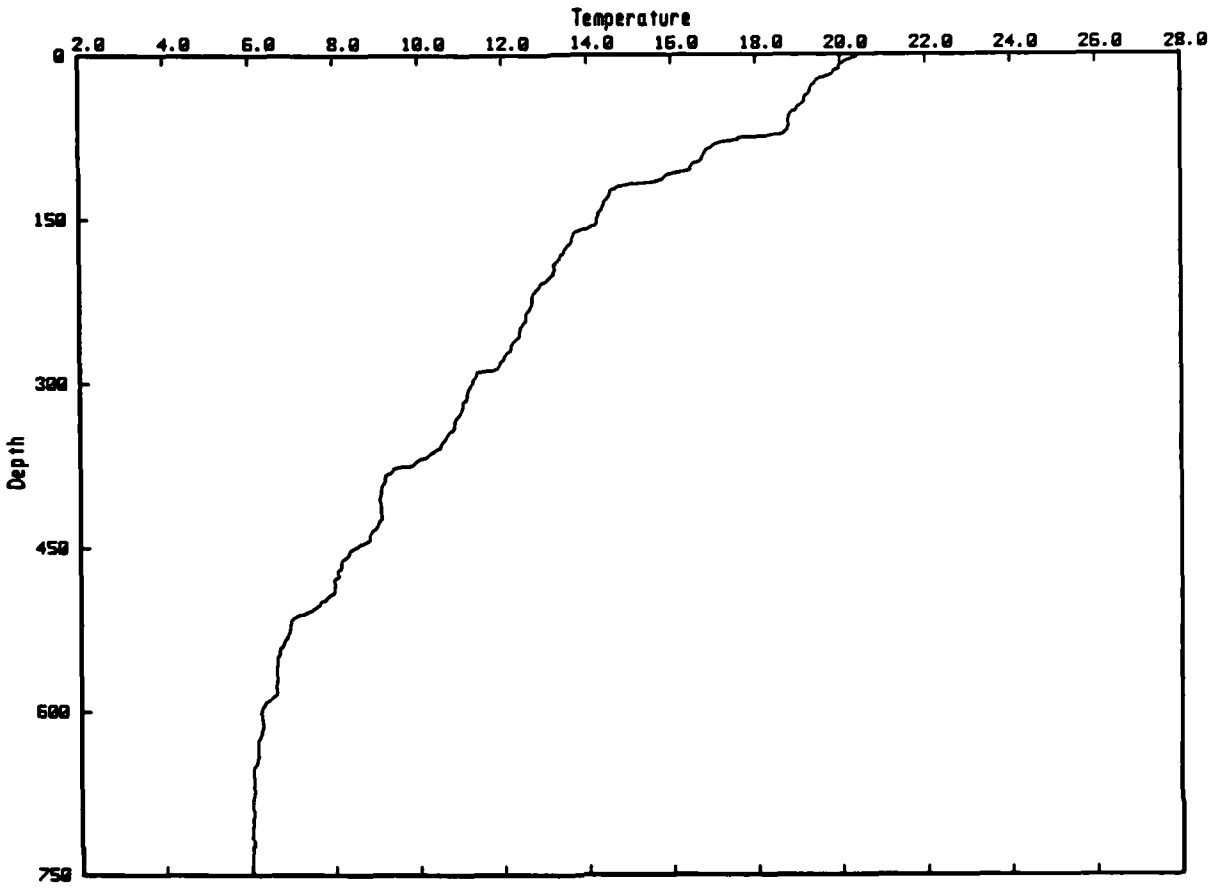
XBT DROP 049 28 18.9N 112 27.0W 21 NOV 84 0852 MST



XBT DROP 049 T-7 RADAR: none GULF COORDS: -29.6 202.1
JDAY 326 1552Z DEPTH 932m/760m SST 19.15 2M TEMPS: SAIL 19.13 XBT 18.95
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2A-4, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	18.9	200	13.0	390	10.1	580	6.9
20	18.8	210	12.8	400	9.8	590	6.8
30	18.6	220	12.5	410	9.5	601	6.7
40	18.4	230	12.1	420	9.3	609	6.6
50	18.1	241	12.1	429	9.2	620	6.6
60	17.7	250	12.0	441	9.2	630	6.5
70	17.6	260	11.6	450	9.1	640	6.3
80	17.3	270	11.1	460	8.8	650	6.3
90	15.6	281	11.0	470	8.3	660	6.2
100	15.5	289	11.0	480	8.0	669	6.2
109	15.0	300	11.0	490	7.8	681	6.2
120	14.6	309	10.9	499	7.7	690	6.2
129	14.4	320	10.9	509	7.8	700	6.1
141	14.4	330	11.0	520	7.8	711	6.0
150	14.3	340	10.9	530	7.7	721	6.0
160	14.2	350	10.9	540	7.6	731	6.1
170	13.8	360	10.8	550	7.4	739	6.0
180	13.4	370	10.5	560	7.3	749	6.0
190	13.2	379	10.2	570	7.1	758	6.1

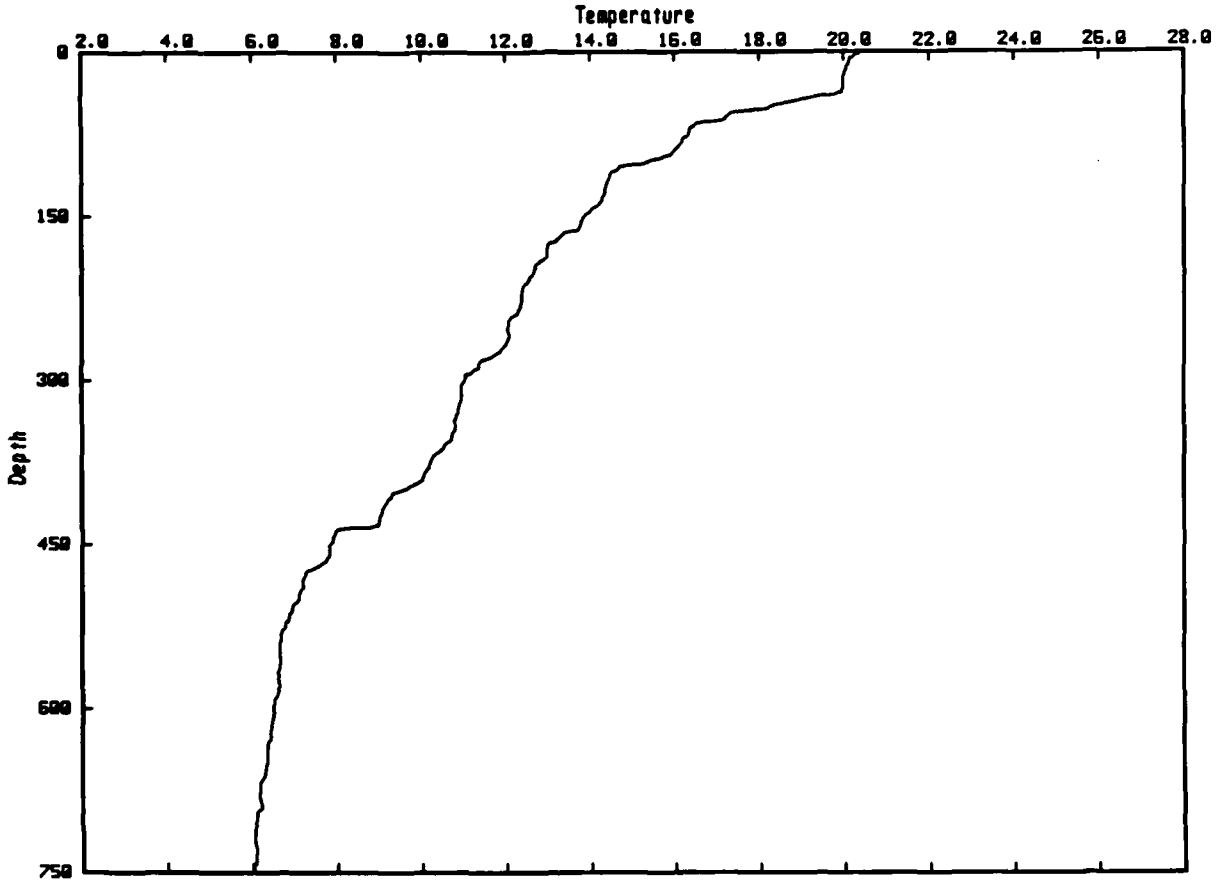
XBT DROP 050 28 17.2N 112 25.5W 21 NOV 84 0906 MST



XBT DROP 050 T-7 RADAR: none GULF COORDS: -29.4 198.1
JDAY 326 1606Z DEPTH 869m/760m SST 20.20 2M TEMPS: SAIL 20.32 XBT 20.28
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2A-5, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.0	200	13.2	390	9.2	580	6.6
20	19.6	210	12.9	400	9.1	590	6.4
29	19.3	218	12.7	411	9.1	600	6.3
40	19.1	230	12.6	420	9.1	611	6.3
50	18.9	240	12.5	430	9.0	619	6.3
60	18.8	250	12.4	440	8.8	629	6.2
70	18.7	260	12.3	451	8.4	641	6.2
80	17.1	270	12.2	460	8.2	649	6.1
90	16.8	280	11.9	470	8.1	659	6.1
100	16.5	290	11.4	480	8.0	669	6.1
110	15.9	300	11.3	490	8.0	679	6.1
120	14.8	310	11.1	500	7.6	689	6.1
130	14.5	321	11.0	510	7.3	701	6.1
141	14.4	330	10.9	520	6.9	711	6.0
151	14.2	340	10.8	531	6.9	720	6.1
160	13.9	350	10.6	540	6.8	731	6.0
170	13.6	360	10.4	550	6.6	739	6.0
180	13.5	370	10.0	560	6.6	750	6.0
189	13.3	380	9.4	571	6.6	760	6.0

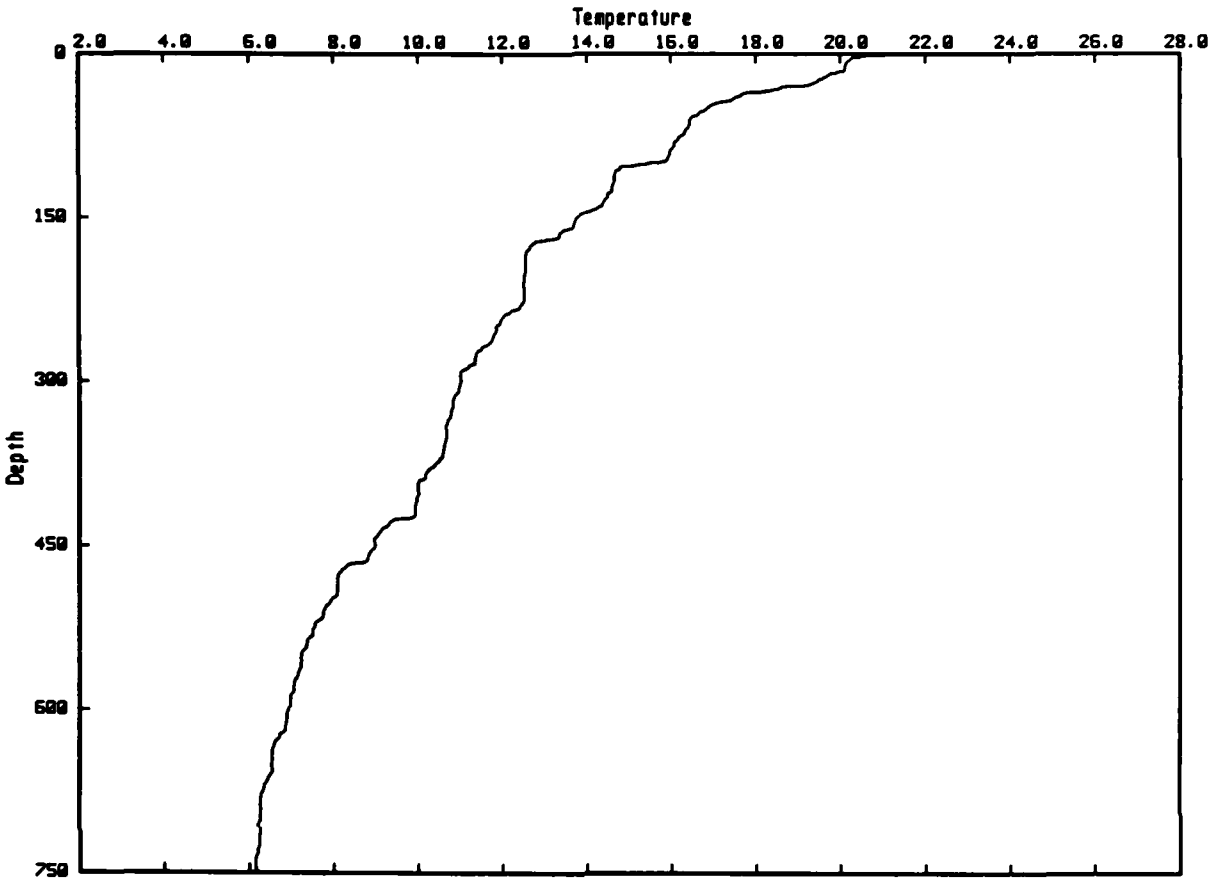
XBT DROP 053 28 15.0N 112 21.6W 21 NOV 84 0926 MST



XBT DROP 053 T-7 RADAR: none GULF COORDS: -26.7 191.1
JDAY 326 1626Z DEPTH 823m/760m SST 20.45 2M TEMPS: SAIL 20.29 XBT 20.24
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2A-6, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.1	200	12.7	390	10.0	580	6.7
20	20.0	211	12.5	400	9.6	589	6.6
30	20.0	221	12.4	409	9.2	600	6.5
40	19.6	230	12.4	419	9.1	610	6.5
50	18.3	240	12.2	430	9.0	621	6.4
60	17.2	249	12.1	440	7.9	630	6.4
70	16.4	260	12.1	450	7.8	640	6.4
80	16.2	270	11.9	460	7.8	650	6.4
90	16.0	280	11.6	470	7.6	660	6.3
100	15.4	290	11.3	480	7.2	670	6.2
110	14.5	300	11.1	490	7.2	680	6.2
119	14.4	310	11.0	499	7.1	690	6.2
130	14.4	320	10.9	511	6.9	701	6.1
140	14.2	331	10.9	520	6.9	709	6.1
150	13.9	340	10.8	530	6.7	720	6.1
160	13.8	351	10.7	540	6.7	729	6.1
170	13.3	361	10.5	550	6.7	740	6.1
180	13.0	370	10.3	560	6.7	750	6.0
190	12.9	380	10.2	571	6.6	760	6.0

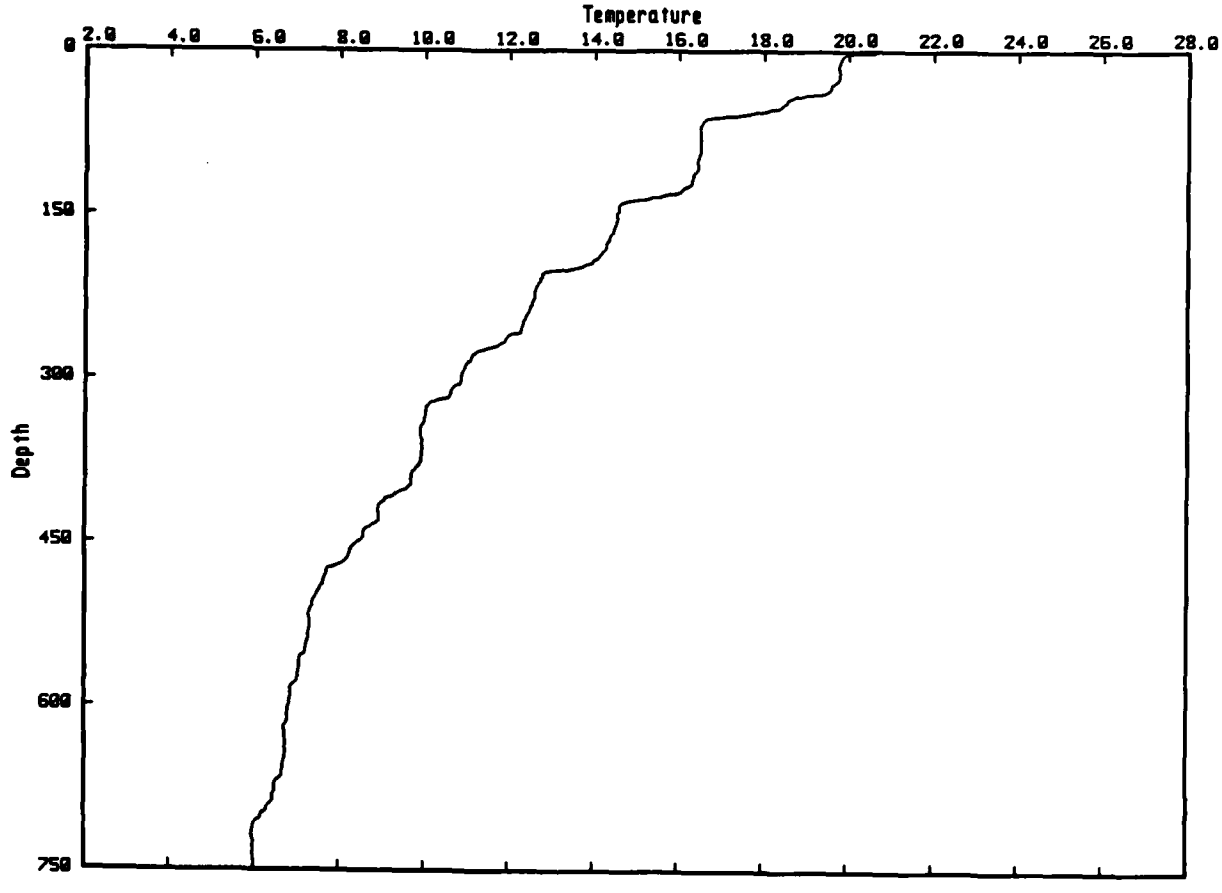
XBT DROP 054 28 13.7N 112 20.2W 21 NOV 84 0938 MST



XBT DROP 054 T-7 RADAR: none GULF COORDS: -26.2 187.8
JDAY 326 1638Z DEPTH 827m/760m SST 20.40 2M TEMPS: SAIL 20.48 XBT 20.27
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2A-7, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.1	200	12.5	390	10.0	580	7.1
20	19.7	210	12.5	400	10.0	590	7.0
30	18.7	220	12.5	410	10.0	600	6.9
40	17.5	230	12.4	419	9.9	610	6.9
51	16.8	240	12.0	430	9.3	620	6.8
60	16.4	250	11.8	440	9.0	630	6.6
70	16.3	259	11.8	450	9.0	641	6.6
80	16.1	270	11.5	460	8.8	650	6.5
90	16.0	280	11.4	470	8.3	660	6.5
100	15.5	289	11.1	481	8.1	670	6.4
110	14.7	300	11.0	490	8.1	680	6.3
120	14.6	311	10.9	501	7.9	690	6.3
130	14.5	320	10.8	510	7.8	700	6.3
141	14.3	330	10.8	520	7.6	711	6.3
150	13.7	340	10.7	531	7.5	719	6.2
160	13.6	350	10.7	540	7.4	729	6.2
170	13.1	359	10.6	550	7.3	740	6.1
180	12.6	370	10.5	560	7.2	750	6.2
190	12.5	380	10.3	570	7.1	759	6.1

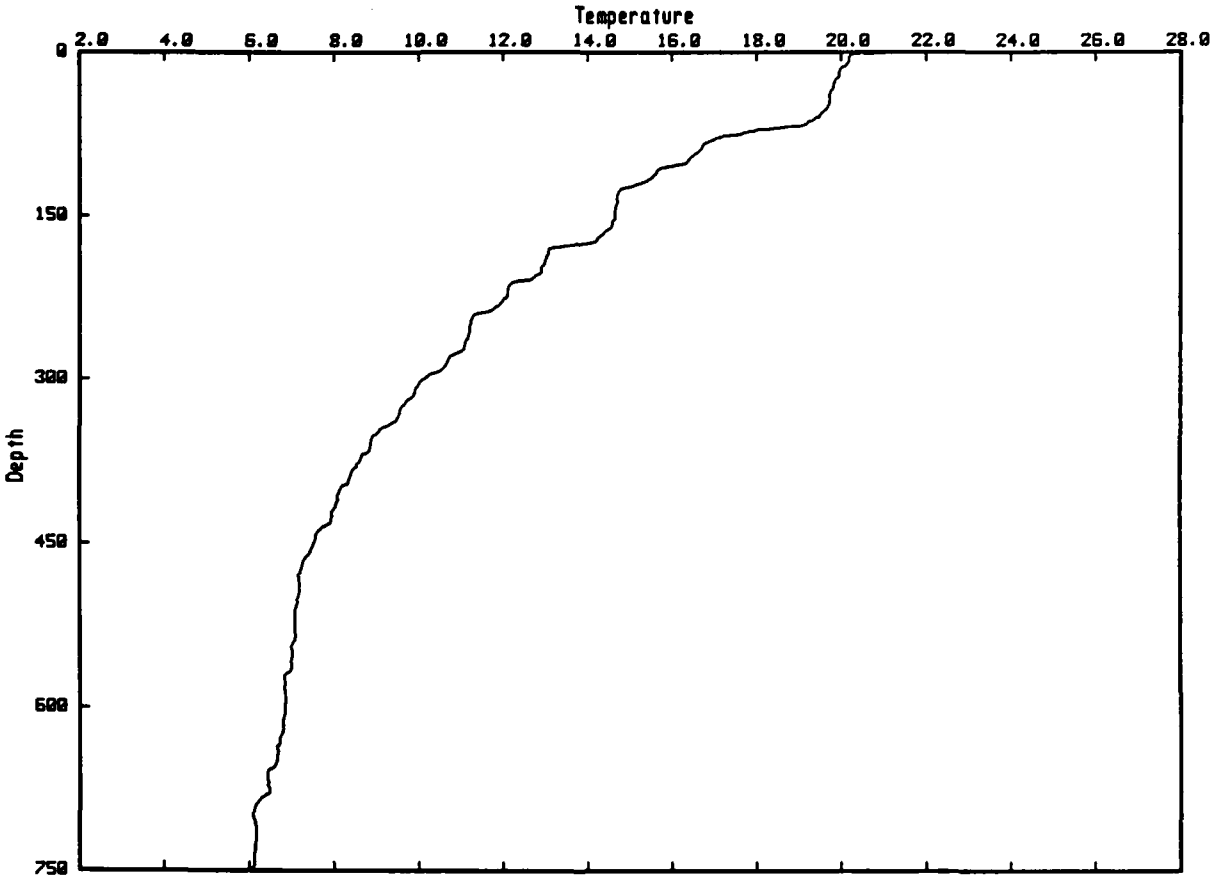
XBT DROP 056 28 11.5N 112 17.9W 21 NOV 84 0958 MST



XBT DROP 056 T-7 RADAR: none GULF COORDS: -25.6 182.3
JDAY 326 1658Z DEPTH 799m/760m SST 20.10 2M TEMPS: SAIL 20.07 XBT 19.89
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2A-8, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
9	19.8	200	13.4	389	9.7	580	6.9
20	19.8	210	12.7	400	9.6	589	6.9
30	19.6	221	12.6	410	9.1	599	6.8
40	19.1	229	12.6	421	8.9	611	6.8
50	18.4	239	12.5	430	8.9	620	6.7
60	17.1	249	12.3	441	8.6	631	6.7
70	16.5	260	12.0	450	8.4	640	6.7
81	16.5	270	11.7	460	8.2	650	6.7
90	16.5	281	11.1	470	8.0	659	6.7
101	16.4	289	10.9	480	7.7	670	6.5
110	16.4	300	10.9	490	7.6	679	6.5
121	16.3	310	10.7	499	7.4	690	6.4
130	15.9	320	10.3	510	7.3	700	6.2
141	14.6	330	10.0	520	7.3	710	6.0
150	14.5	340	10.0	530	7.3	720	6.0
160	14.5	351	9.9	539	7.3	730	6.0
171	14.4	360	9.9	550	7.2	740	6.0
180	14.3	369	9.9	561	7.1	751	6.0
191	14.1	380	9.8	570	7.0	760	6.0

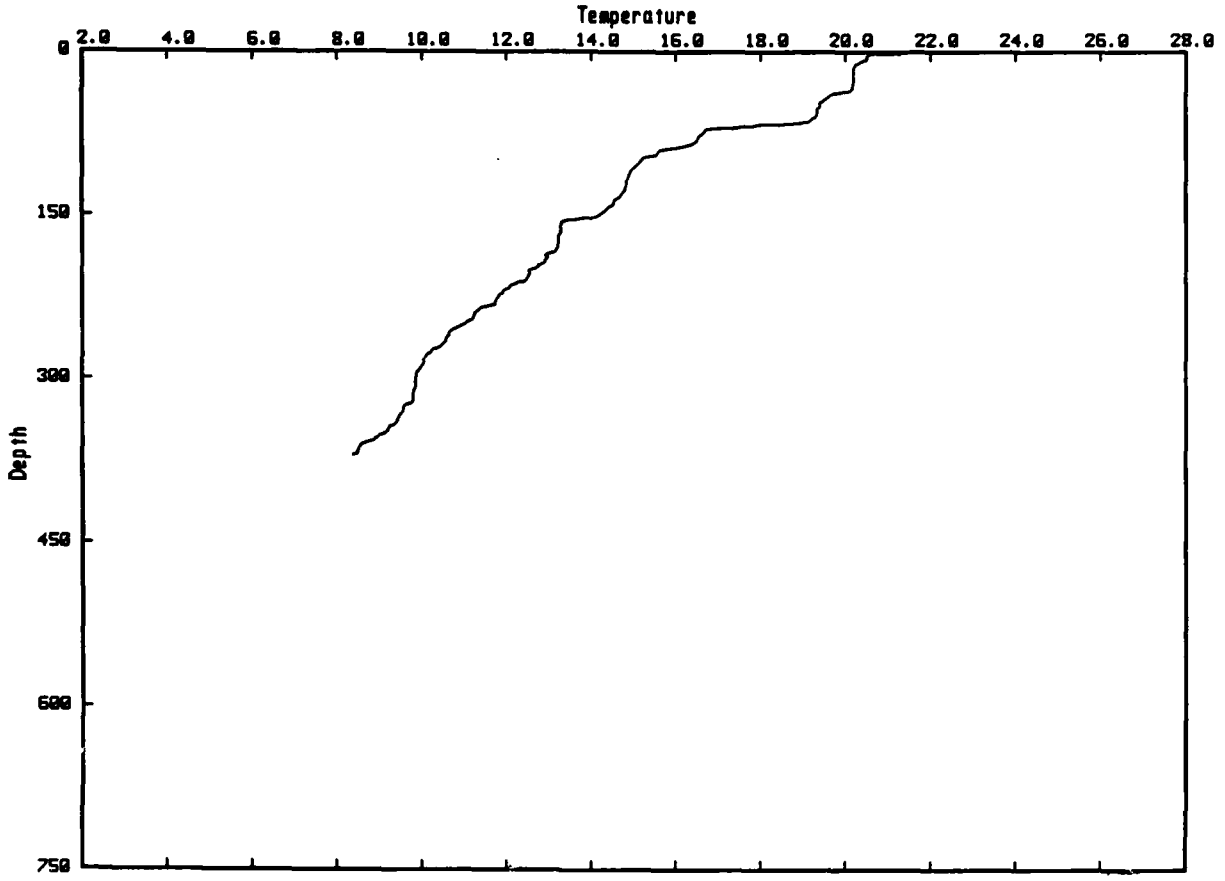
XBT DROP 057 28 10.1N 112 16.5W 21 NOV 84 1011 MST



XBT DROP 057 T-7 RADAR: none GULF COORDS: -25.3 178.8
JDAY 326 1711Z DEPTH 752m/752m SST 20.25 2M TEMPS: SAIL 20.26 XBT 20.20
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2A-9, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.2	200	12.9	392	8.4	581	6.8
19	20.0	210	12.5	400	8.2	590	6.9
30	19.8	219	12.1	410	8.1	601	6.8
41	19.7	229	12.0	420	8.0	609	6.8
51	19.7	241	11.4	430	7.9	619	6.8
60	19.4	251	11.2	440	7.8	631	6.7
70	18.4	261	11.2	450	7.5	640	6.7
80	17.0	269	11.1	460	7.4	652	6.6
90	16.7	280	10.7	471	7.2	659	6.4
100	16.4	291	10.6	480	7.2	670	6.4
110	15.6	300	10.1	491	7.2	680	6.4
120	15.3	310	9.9	500	7.1	689	6.1
130	14.7	320	9.7	510	7.1	701	6.1
140	14.7	329	9.6	520	7.1	710	6.2
151	14.6	340	9.4	530	7.1	721	6.2
160	14.6	350	9.0	540	7.0	730	6.1
170	14.3	358	8.9	549	7.0	740	6.1
180	13.2	369	8.7	559	7.0	750	5.9
190	13.0	380	8.5	570	6.9		

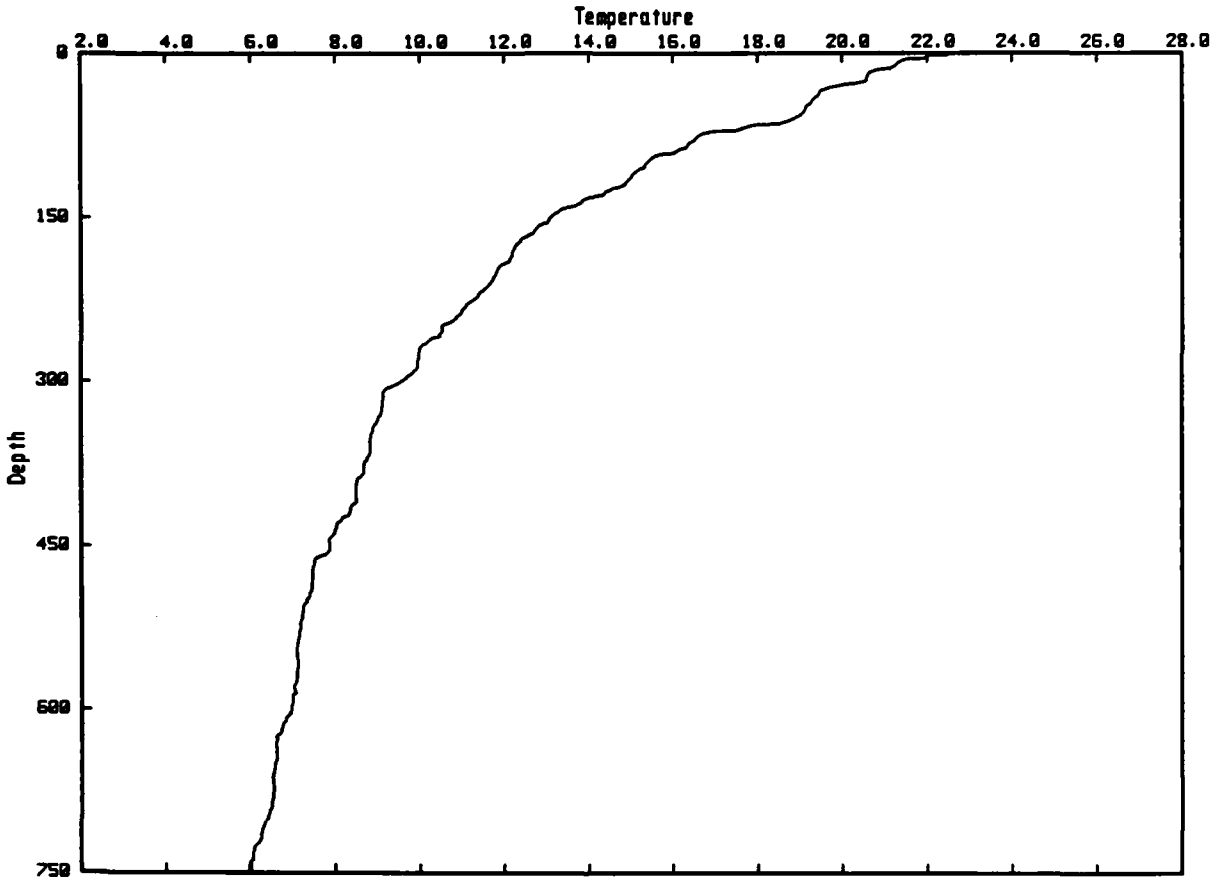
XBT DROP 058 28 8.7N 112 15.2W 21 NOV 84 1023 MST



XBT DROP 058 T-7 RADAR: none GULF COORDS: -25.1 175.5
JDAY 326 1723Z DEPTH 741m/370m SST 20.50 2M TEMPS: SAIL 20.53 XBT 20.53
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2A-10, SPRING TIDE (BAD BELOW 370M)

Z	TEMP	Z	TEMP
10	20.3	200	12.6
21	20.2	210	12.5
30	20.2	220	11.9
40	19.6	230	11.7
50	19.4	240	11.3
60	19.3	250	11.0
70	17.1	260	10.6
80	16.5	270	10.4
90	15.6	280	10.1
100	15.2	290	10.0
110	14.9	301	9.8
120	14.8	310	9.8
130	14.7	320	9.8
140	14.5	330	9.5
150	14.2	340	9.4
161	13.3	350	9.1
170	13.2	360	8.6
181	13.2	370	8.4
190	12.9		

XBT DROP 059 28 7.1N 112 14.0W 21 NOV 84 1035 MST



XBT DROP 059 T-7 RADAR: none GULF COORDS: -25.3 172.0
JDAY 326 1735Z DEPTH 767m/760m SST 21.85 2M TEMPS: SAIL 21.76 XBT 21.98
GULF OF CALIFORNIA: GUAYMAS BASIN, END MX2A LINE; MX2A-11, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
9	21.3	200	11.8	390	8.5	580	7.0
20	20.6	210	11.7	400	8.5	591	7.0
30	19.9	220	11.4	410	8.5	601	6.9
40	19.4	230	11.1	420	8.3	610	6.8
50	19.1	241	10.9	430	8.0	620	6.7
60	18.8	250	10.5	440	7.9	631	6.6
70	17.5	260	10.4	450	7.9	640	6.6
80	16.5	270	10.0	460	7.6	649	6.6
90	16.1	279	10.0	470	7.5	660	6.5
99	15.4	290	9.9	480	7.5	670	6.5
110	15.1	300	9.6	490	7.4	679	6.5
120	14.9	310	9.1	500	7.3	691	6.5
130	14.2	320	9.1	510	7.2	700	6.4
140	13.6	330	9.1	519	7.2	710	6.3
150	13.1	340	8.9	531	7.1	720	6.2
160	12.8	351	8.8	541	7.1	731	6.1
170	12.4	361	8.8	550	7.1	740	6.0
180	12.2	370	8.8	560	7.1	750	6.0
190	12.1	380	8.7	569	7.1	759	5.9

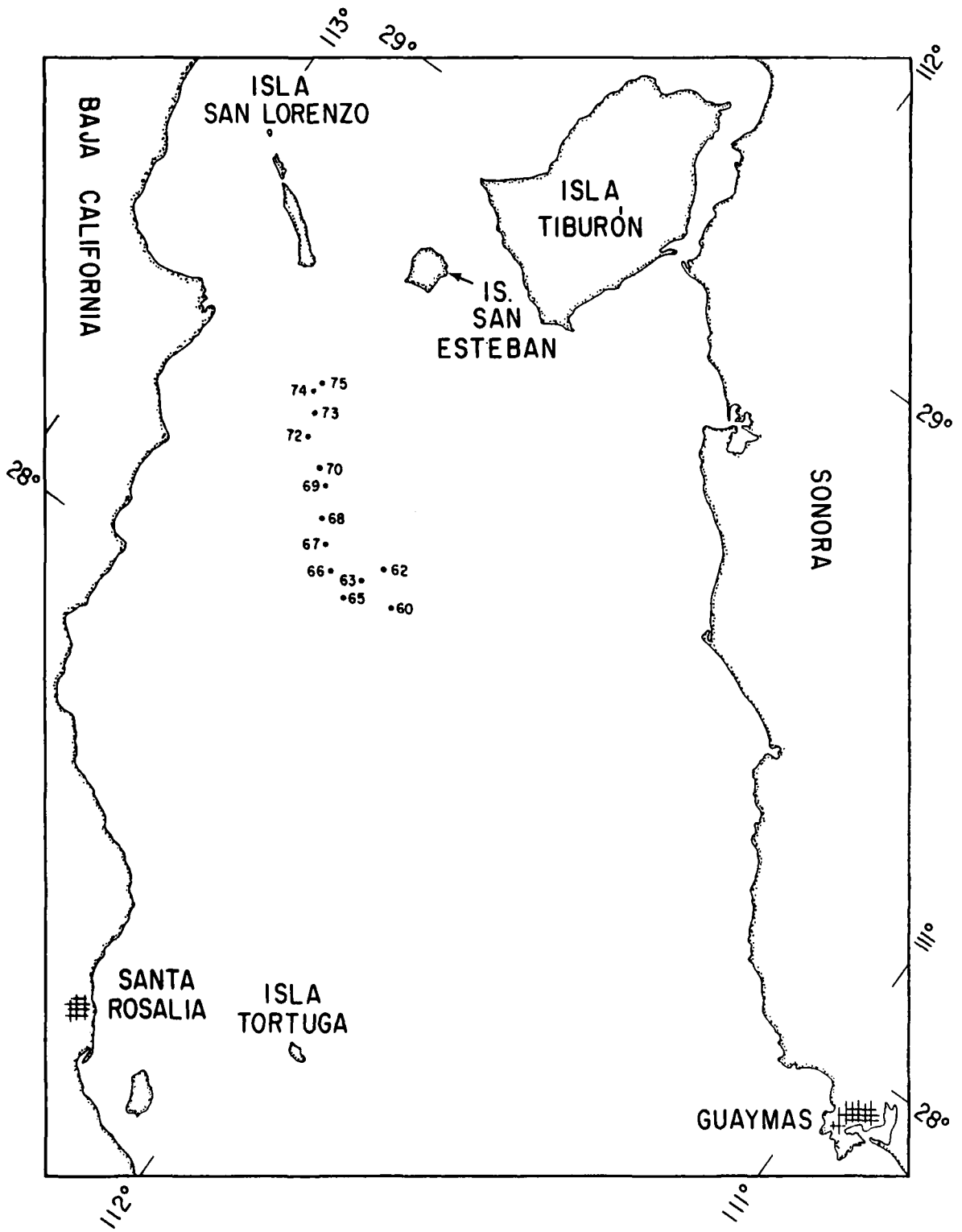
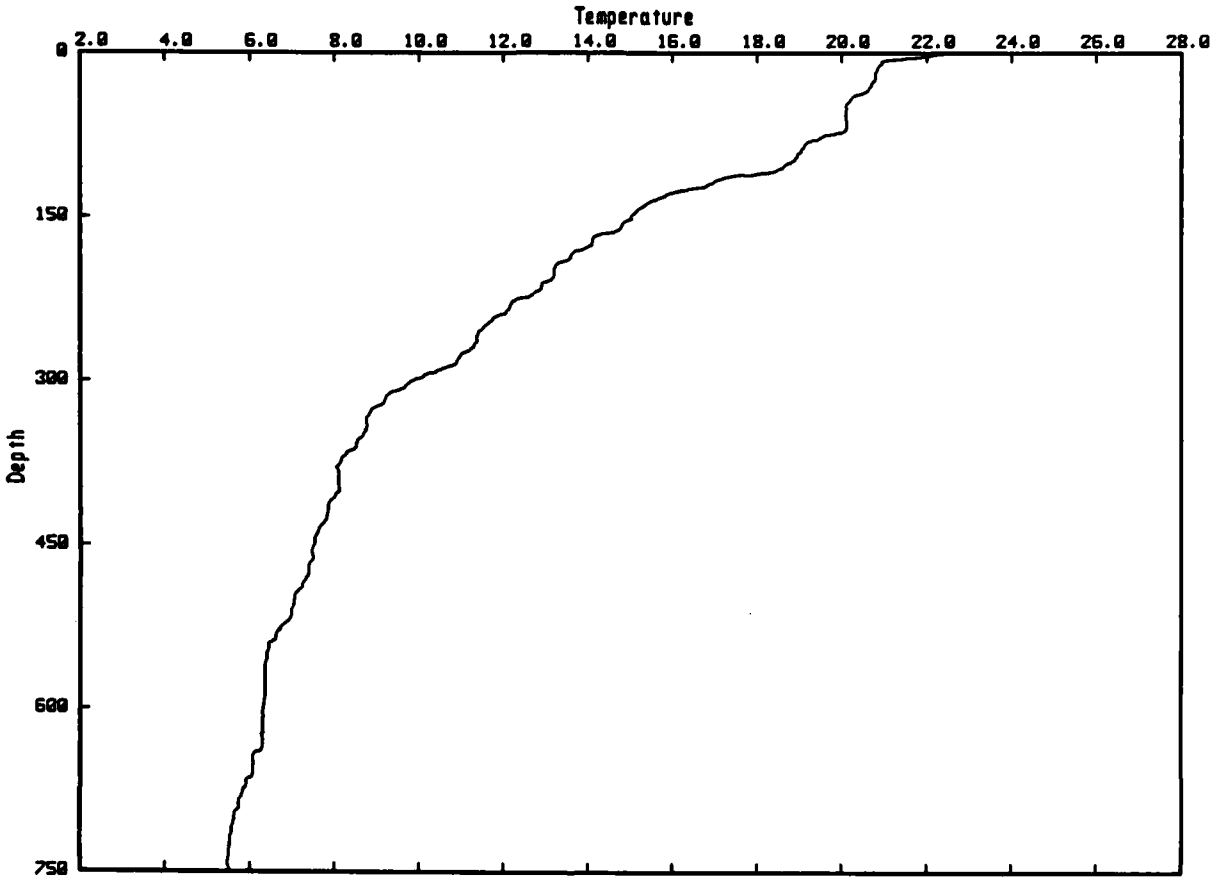


Figure 13. MX2B Section: XBT Station Locations

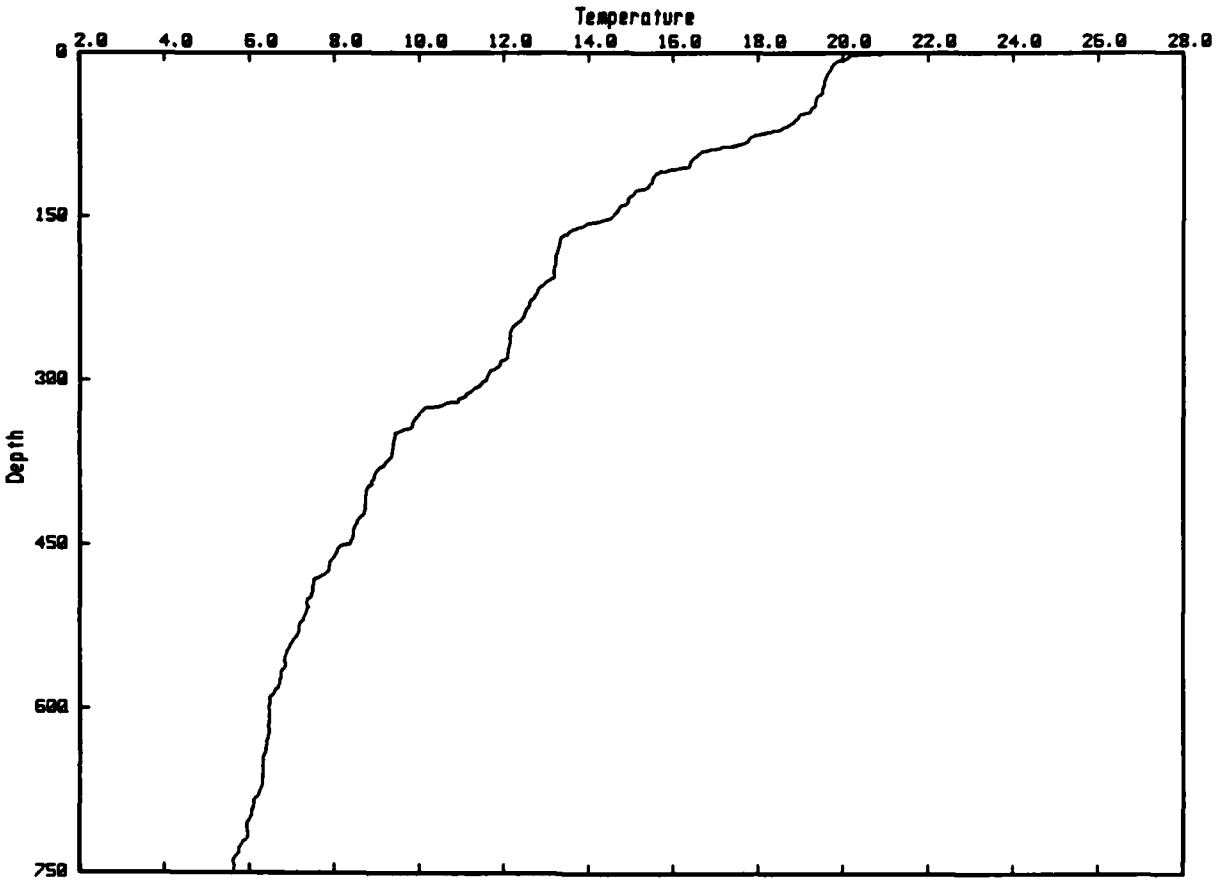
XBT DROP 060 28 10.9N 112 13.2W 21 NOV 84 1446 MST



XBT DROP 060 T-7 RADAR: none GULF COORDS: -20.0 176.9
JDAY 326 2146Z DEPTH 860m/760m SST 22.55 2M TEMPS: SAIL 22.73 XBT 21.85
GULF OF CALIFORNIA: GUAYMAS BASIN:, BEGIN MX2B LINE; MX2B-1, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.9	200	13.2	391	8.1	580	6.4
20	20.8	210	12.9	400	8.1	590	6.4
30	20.7	220	12.7	411	7.9	600	6.3
40	20.3	230	12.1	420	7.8	610	6.3
50	20.1	240	11.9	430	7.8	620	6.3
60	20.1	250	11.5	440	7.6	630	6.3
70	20.1	259	11.4	450	7.5	640	6.1
80	19.3	270	11.2	460	7.5	649	6.1
90	19.0	280	10.9	470	7.4	660	6.1
100	18.8	290	10.5	479	7.3	669	5.9
110	18.1	300	9.8	490	7.2	680	5.8
120	16.9	310	9.3	500	7.0	690	5.8
130	15.8	320	9.2	510	7.0	700	5.6
140	15.3	330	8.8	521	6.9	709	5.6
150	15.0	340	8.8	529	6.6	720	5.5
160	14.8	350	8.7	540	6.4	731	5.5
170	14.1	360	8.5	550	6.4	739	5.5
180	13.8	370	8.2	560	6.4	749	5.5
190	13.5	380	8.1	571	6.4		

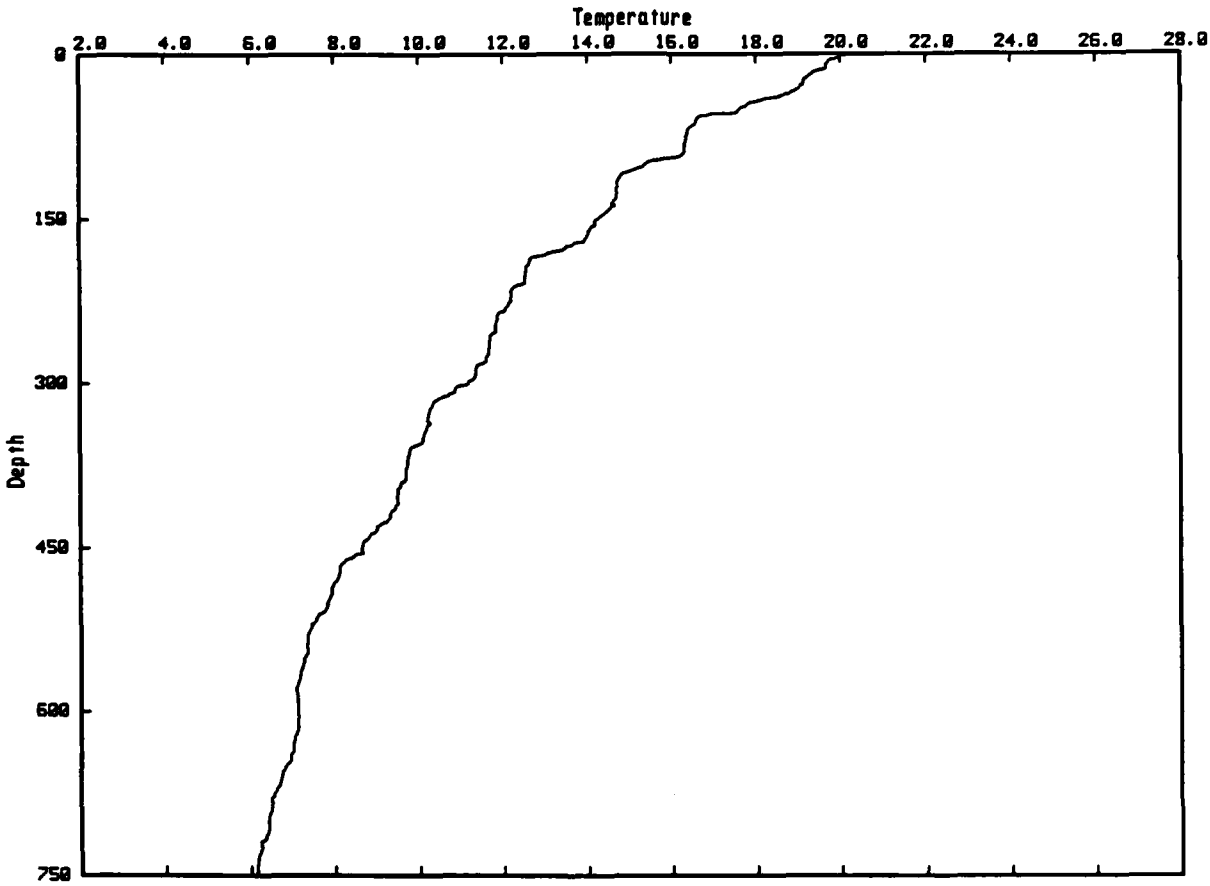
XBT DROP 062 28 13.9N 112 16.8W 21 NOV 84 1507 MST



XBT DROP 062 T-7 RADAR: none GULF COORDS: -21.5 184.8
JDAY 326 2207Z DEPTH 915m/760m SST 20.07 2M TEMPS: SAIL 20.34 XBT 20.14
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2B-2, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.8	200	13.2	390	8.9	580	6.7
20	19.6	210	13.0	400	8.8	590	6.5
30	19.6	220	12.8	410	8.7	600	6.4
40	19.4	230	12.6	420	8.7	610	6.5
50	19.3	239	12.5	430	8.5	619	6.4
60	18.9	250	12.2	440	8.4	630	6.4
70	18.5	261	12.1	450	8.3	639	6.4
80	17.8	270	12.1	459	8.0	650	6.3
90	16.7	280	12.1	470	7.9	659	6.3
100	16.4	290	11.8	480	7.6	670	6.3
110	15.6	300	11.6	490	7.5	680	6.2
120	15.4	310	11.2	500	7.4	690	6.1
130	15.0	320	10.8	510	7.4	700	6.0
140	14.7	330	10.0	520	7.3	710	5.9
150	14.6	339	9.8	530	7.2	721	5.9
160	13.8	350	9.4	539	7.0	731	5.8
170	13.4	360	9.4	550	6.9	741	5.6
181	13.3	370	9.3	560	6.9	750	5.6
191	13.2	380	9.1	569	6.7	760	5.5

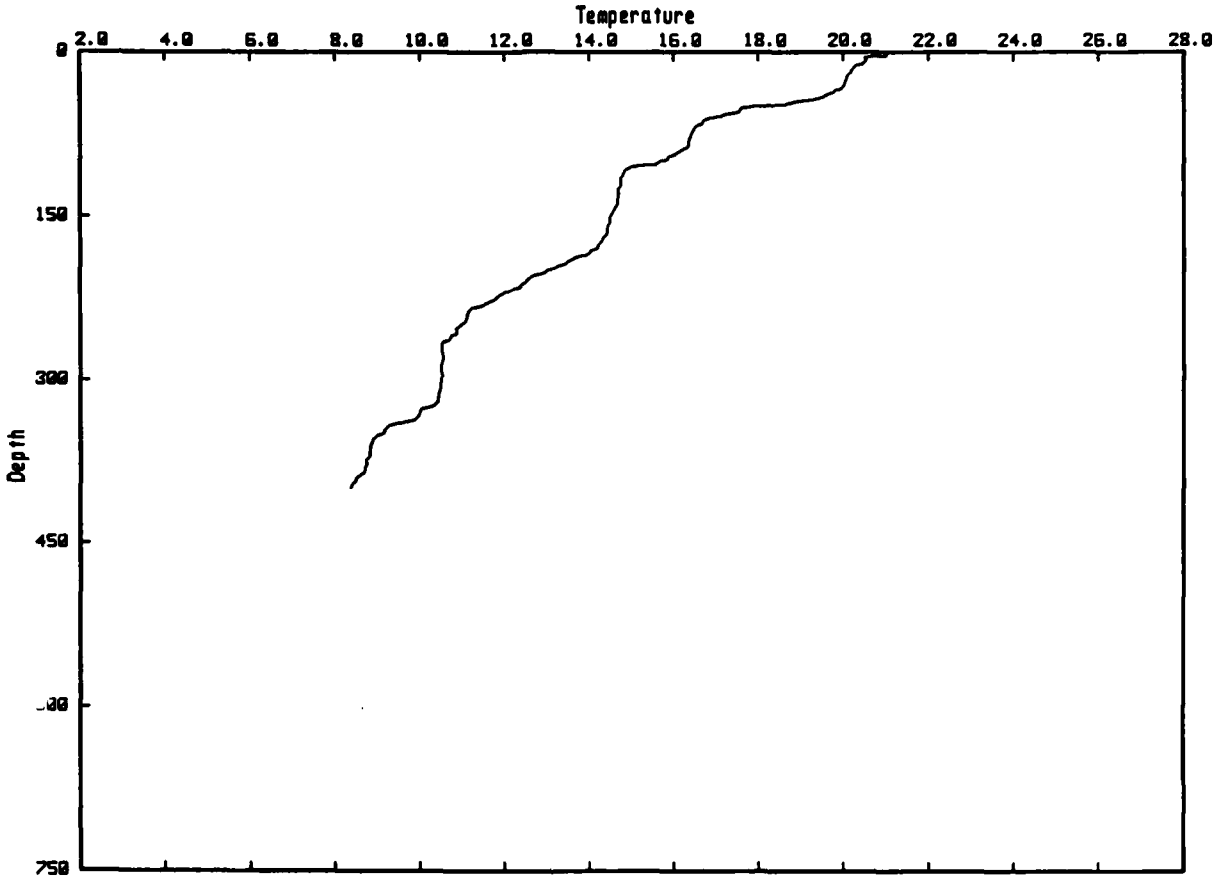
XBT DROP 063 28 11.4N 112 18.1W 21 NOV 84 1522 MST



XBT DROP 063 T-7 RADAR: none GULF COORDS: -26.0 182.3
JDAY 326 2222Z DEPTH 860m/760m SST 20.20 2M TEMPS: SAIL 20.24 XBT 19.90
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2B-3, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.7	200	12.5	390	9.6	579	7.1
20	19.3	210	12.4	400	9.5	590	7.1
30	19.0	220	12.2	410	9.5	599	7.1
40	18.4	230	12.1	420	9.3	610	7.1
51	17.6	240	11.9	430	9.0	621	7.1
60	16.6	250	11.8	440	8.8	630	7.0
70	16.4	260	11.7	450	8.7	640	6.9
80	16.3	270	11.7	460	8.4	650	6.9
90	16.3	280	11.6	470	8.1	659	6.7
100	15.4	290	11.4	480	8.1	670	6.6
110	14.8	300	11.2	490	7.9	680	6.5
120	14.7	310	10.7	500	7.8	690	6.5
130	14.7	320	10.3	510	7.7	699	6.4
140	14.6	330	10.2	520	7.5	711	6.4
150	14.3	340	10.2	530	7.4	720	6.3
160	14.1	350	10.1	540	7.3	731	6.2
170	13.9	360	9.8	550	7.3	740	6.1
180	13.3	370	9.7	560	7.2	749	6.1
189	12.6	380	9.7	570	7.2	759	6.1

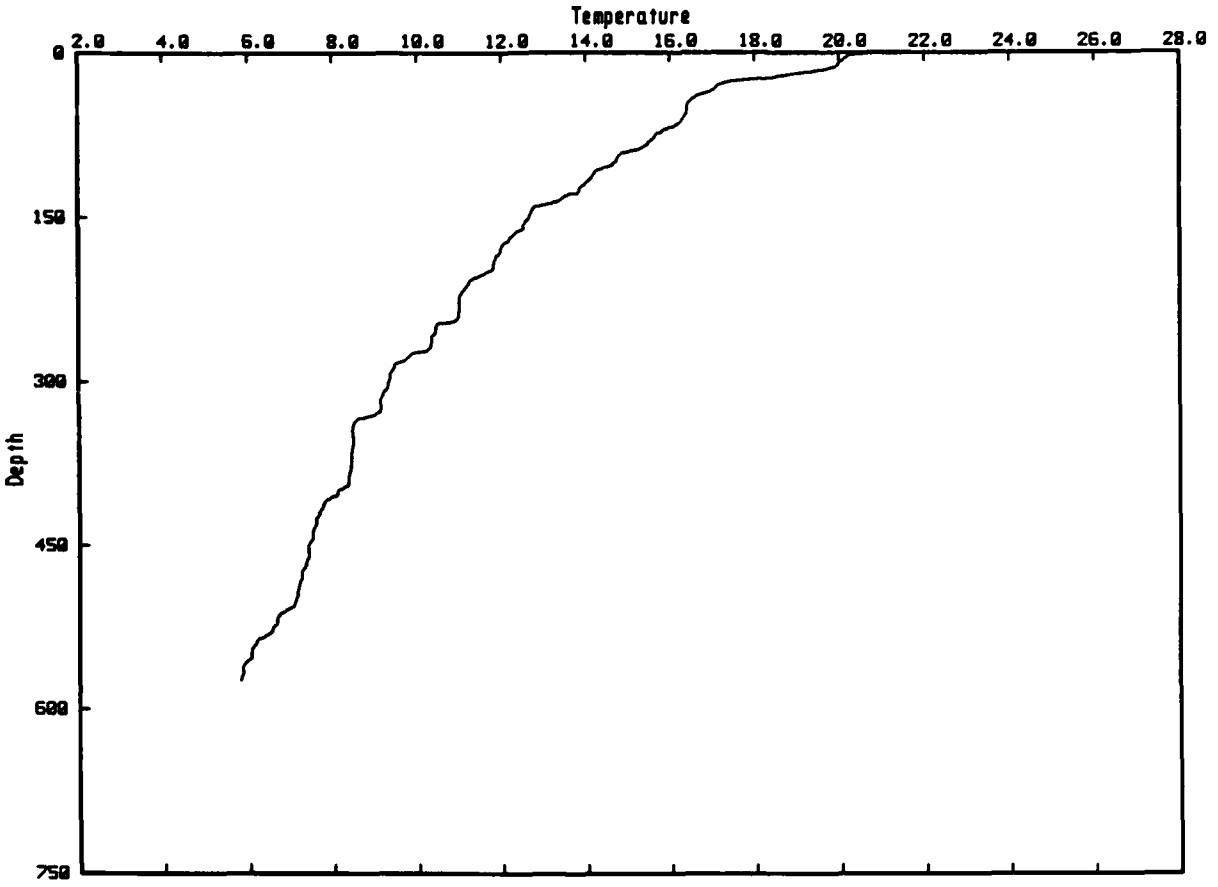
XBT DROP 065 28 8.8N 112 18.6W 21 NOV 84 1541 MST



XBT DROP 065 T-7 RADAR: none GULF COORDS: -29.5 178.9
JDAY 326 2241Z DEPTH 433m/400m SST 20.60 2M TEMPS: SAIL 20.61 XBT 20.72
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2B-4, SPRING TIDE (BAD BELOW 400M)

Z	TEMP	Z	TEMP	Z	TEMP
10	20.5	200	13.0	390	8.5
20	20.1	211	12.5	399	8.4
30	20.0	220	12.0		
40	19.6	230	11.5		
50	17.8	240	11.1		
60	16.9	250	10.9		
70	16.5	260	10.7		
81	16.4	269	10.5		
90	16.2	280	10.6		
100	15.7	290	10.5		
110	14.8	300	10.5		
120	14.8	310	10.5		
130	14.7	320	10.4		
140	14.7	330	10.0		
150	14.5	341	9.4		
160	14.4	350	9.1		
170	14.3	360	8.8		
180	14.2	370	8.8		
190	13.6	380	8.7		

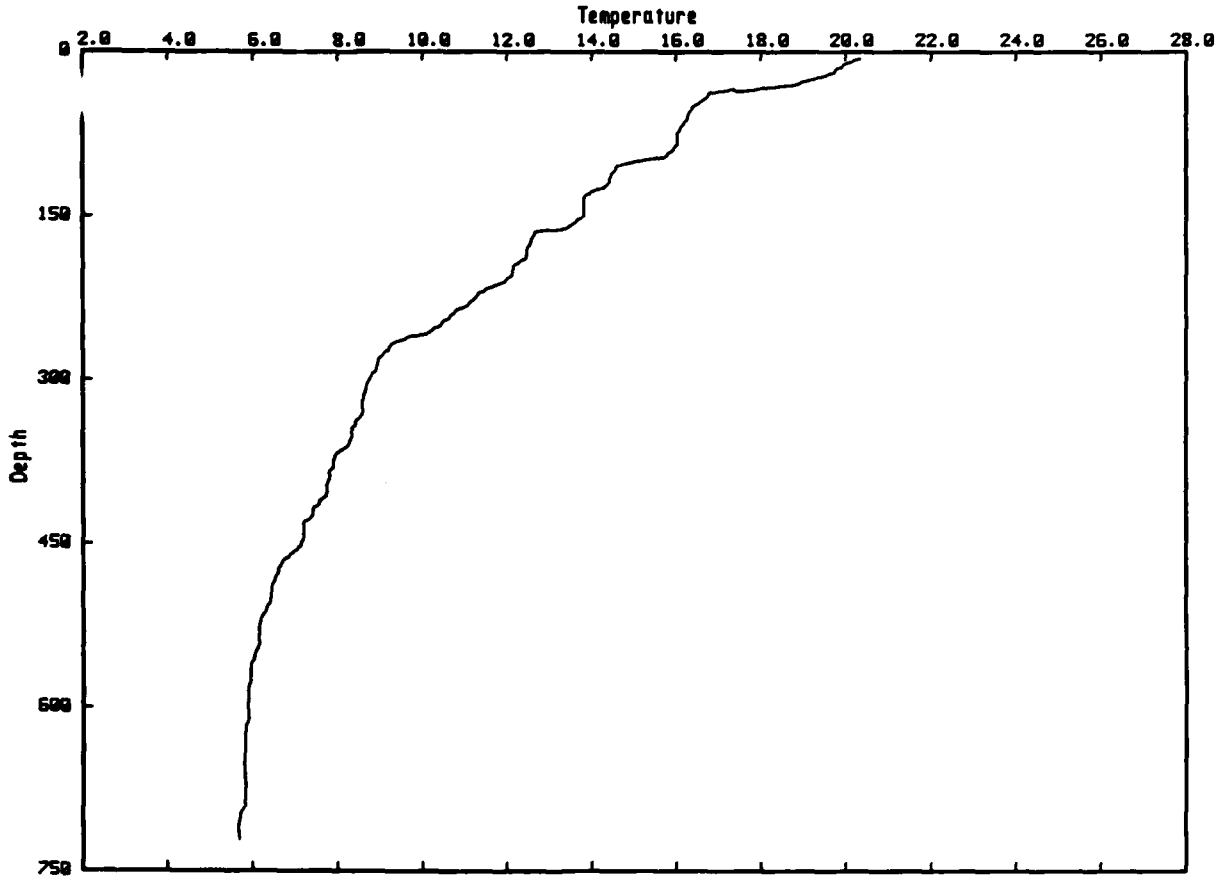
XBT DROP 066 28 10.3N 112 21.7W 21 NOV 84 1556 MST



XBT DROP 066 T-7 RADAR: none GULF COORDS: -32.0 184.2
JDAY 326 2256Z DEPTH 590m/575m SST 20.26 2M TEMPS: SAIL 20.51 XBT 20.18
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2B-5, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	20.0	200	11.6	390	8.4
20	18.9	210	11.2	399	8.1
30	17.1	220	11.0	410	7.8
40	16.6	229	11.0	420	7.7
50	16.4	240	11.0	430	7.6
60	16.3	250	10.4	441	7.5
70	15.9	260	10.3	450	7.4
80	15.5	271	10.2	460	7.4
90	15.1	280	9.7	469	7.3
100	14.7	289	9.4	480	7.2
110	14.2	300	9.3	490	7.2
120	14.0	309	9.2	499	7.1
130	13.6	321	9.1	510	6.9
140	12.9	330	9.0	520	6.7
149	12.7	341	8.5	530	6.5
160	12.5	349	8.5	540	6.2
170	12.2	361	8.4	550	6.1
180	12.0	370	8.4	561	5.9
191	11.8	379	8.4	569	5.8

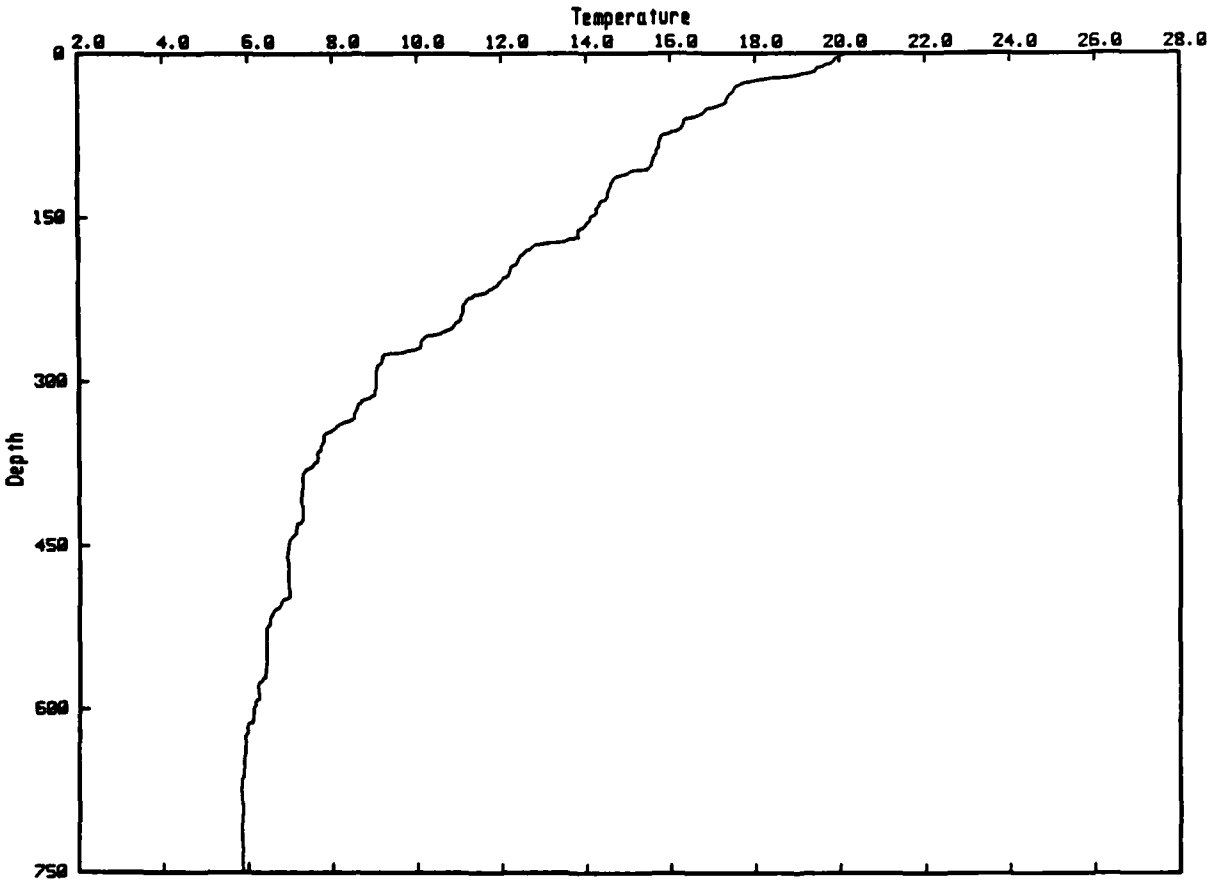
XBT DROP 067 28 12.3N 112 24.3W 21 NOV 84 1611 MST



XBT DROP 067 T-7 RADAR: none GULF COORDS: -33.2 189.6
JDAY 326 2311Z DEPTH 723m/723m SST 20.30 2M TEMPS: SAIL 20.42 XBT .00
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2B-6, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.1	201	12.1	390	7.8	580	5.9
20	19.6	210	11.9	400	7.8	590	5.9
30	18.9	220	11.4	410	7.6	600	5.9
40	16.8	230	11.1	420	7.4	610	5.9
50	16.4	240	10.7	430	7.2	619	5.8
60	16.3	250	10.4	440	7.2	630	5.8
70	16.1	260	9.7	450	7.1	641	5.8
80	16.0	270	9.2	460	6.9	650	5.8
90	15.9	280	9.0	470	6.6	660	5.8
100	15.1	290	8.9	480	6.5	670	5.8
110	14.5	300	8.8	490	6.4	681	5.8
120	14.4	309	8.7	500	6.4	690	5.8
130	13.9	320	8.6	510	6.3	700	5.7
140	13.8	330	8.6	520	6.2	710	5.7
150	13.8	340	8.4	530	6.1	720	5.7
160	13.5	350	8.3	540	6.1		
170	12.6	360	8.3	550	6.1		
180	12.5	371	7.9	559	6.0		
190	12.4	380	7.9	570	5.9		

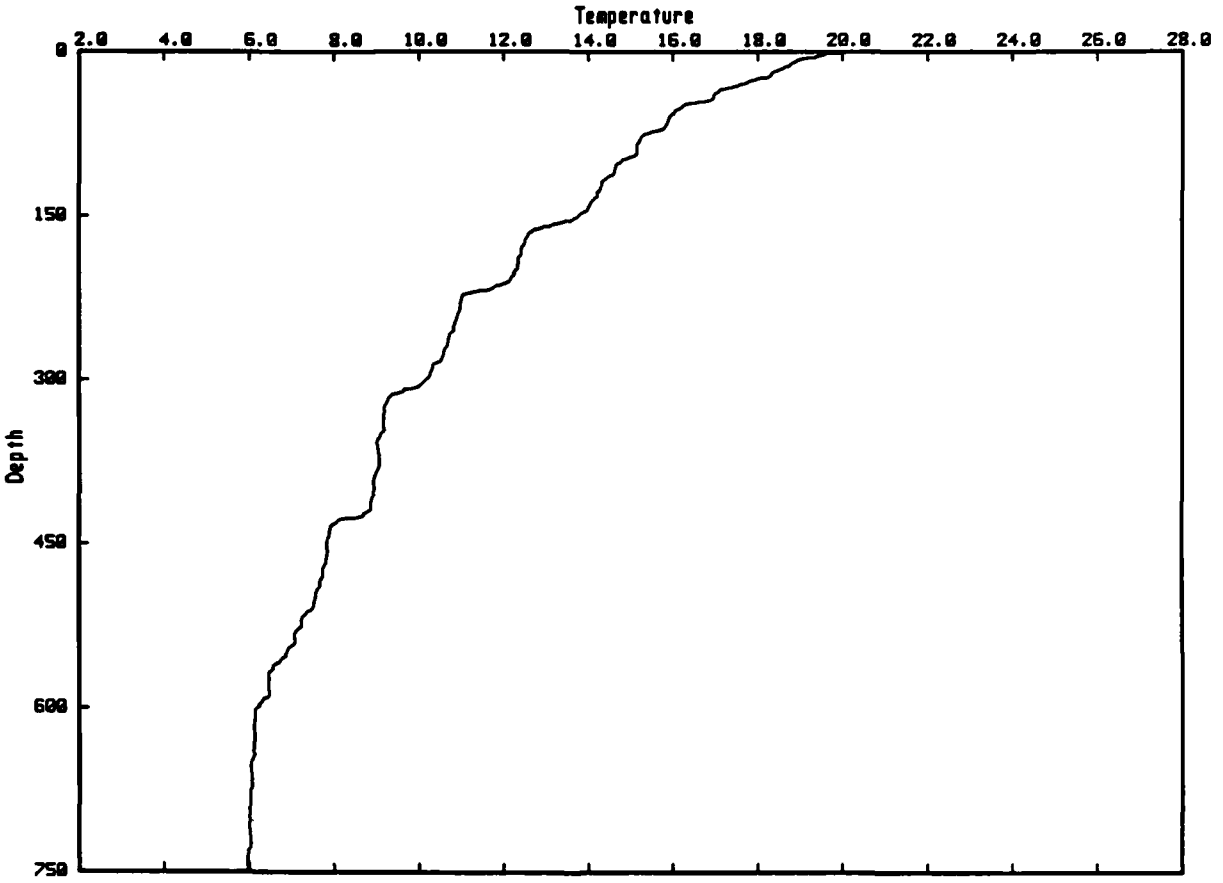
XBT DROP 068 28 14.2N 112 26.5W 21 NOV 84 1626 MST



XBT DROP 068 T-7 RADAR: none GULF COORDS: -34.1 194.6
JDAY 326 2326Z DEPTH 850m/760m SST 20.05 2M TEMPS: SAIL 20.24 XBT 19.96
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2B-7, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.8	200	12.2	390	7.3	580	6.2
20	19.0	210	11.9	400	7.3	590	6.2
30	17.6	220	11.4	409	7.3	599	6.1
40	17.3	230	11.1	419	7.3	610	6.1
50	16.9	239	11.1	430	7.1	620	6.0
60	16.4	250	10.9	440	7.1	630	5.9
70	16.2	260	10.2	451	6.9	640	5.9
80	15.7	270	10.0	460	6.9	652	5.9
90	15.7	280	9.1	470	6.9	660	5.9
100	15.6	290	9.0	481	6.9	670	5.8
110	15.0	300	9.0	490	6.9	679	5.8
120	14.6	309	9.0	500	6.8	690	5.9
130	14.5	320	8.6	510	6.6	701	5.9
140	14.3	329	8.5	520	6.5	711	5.8
150	14.1	340	8.1	530	6.4	719	5.9
160	13.9	350	7.8	541	6.4	730	5.9
170	13.6	360	7.7	550	6.4	739	5.9
180	12.6	370	7.6	560	6.4	751	5.9
190	12.4	380	7.4	570	6.4	758	5.9

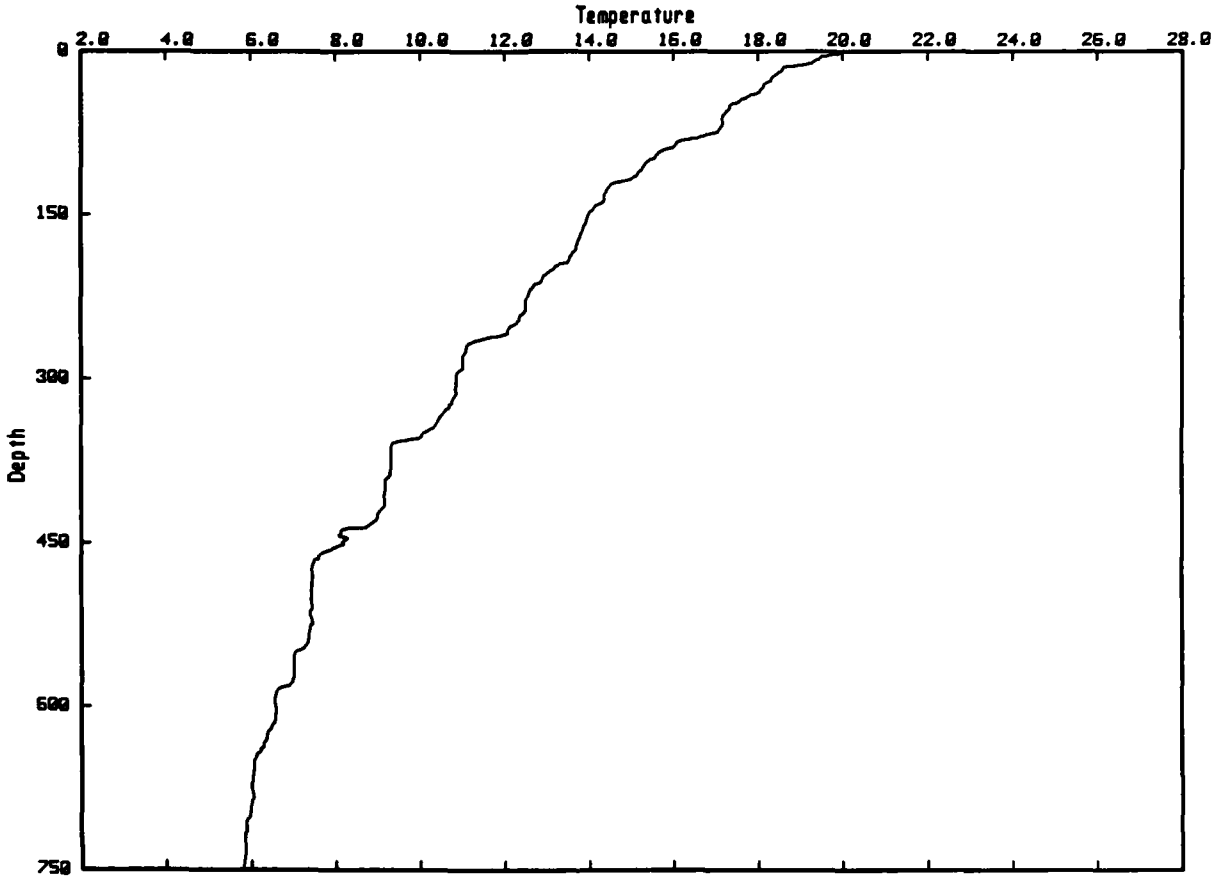
XBT DROP 069 28 17.3N 112 28.6W 21 NOV 84 1642 MST



XBT DROP 069 T-7 RADAR: none GULF COORDS: -33.4 201.3
JDAY 326 2342Z DEPTH 1005m/760m SST 20.02 2M TEMPS: SAIL 20.23 XBT 19.43
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2B-8, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	18.9	200	12.3	391	8.9	579	6.5
20	18.3	210	12.1	399	8.9	590	6.4
30	17.6	220	11.2	410	8.9	600	6.2
39	17.0	230	11.0	420	8.8	610	6.1
50	16.2	240	10.9	430	8.1	620	6.1
60	15.9	250	10.8	440	7.9	631	6.1
70	15.8	260	10.7	450	7.8	640	6.1
80	15.2	271	10.6	460	7.8	650	6.0
90	15.1	281	10.5	470	7.8	661	6.1
100	14.8	290	10.3	480	7.7	670	6.1
110	14.6	300	10.1	490	7.6	679	6.0
120	14.3	310	9.6	499	7.6	690	6.0
130	14.2	320	9.2	510	7.5	700	6.0
140	14.0	330	9.2	520	7.2	711	6.0
150	13.8	339	9.2	529	7.1	719	6.1
160	13.0	350	9.1	541	7.1	730	6.0
170	12.5	360	9.0	550	6.9	741	6.0
180	12.4	371	9.1	560	6.6	751	6.0
190	12.4	381	9.0	570	6.5	759	5.9

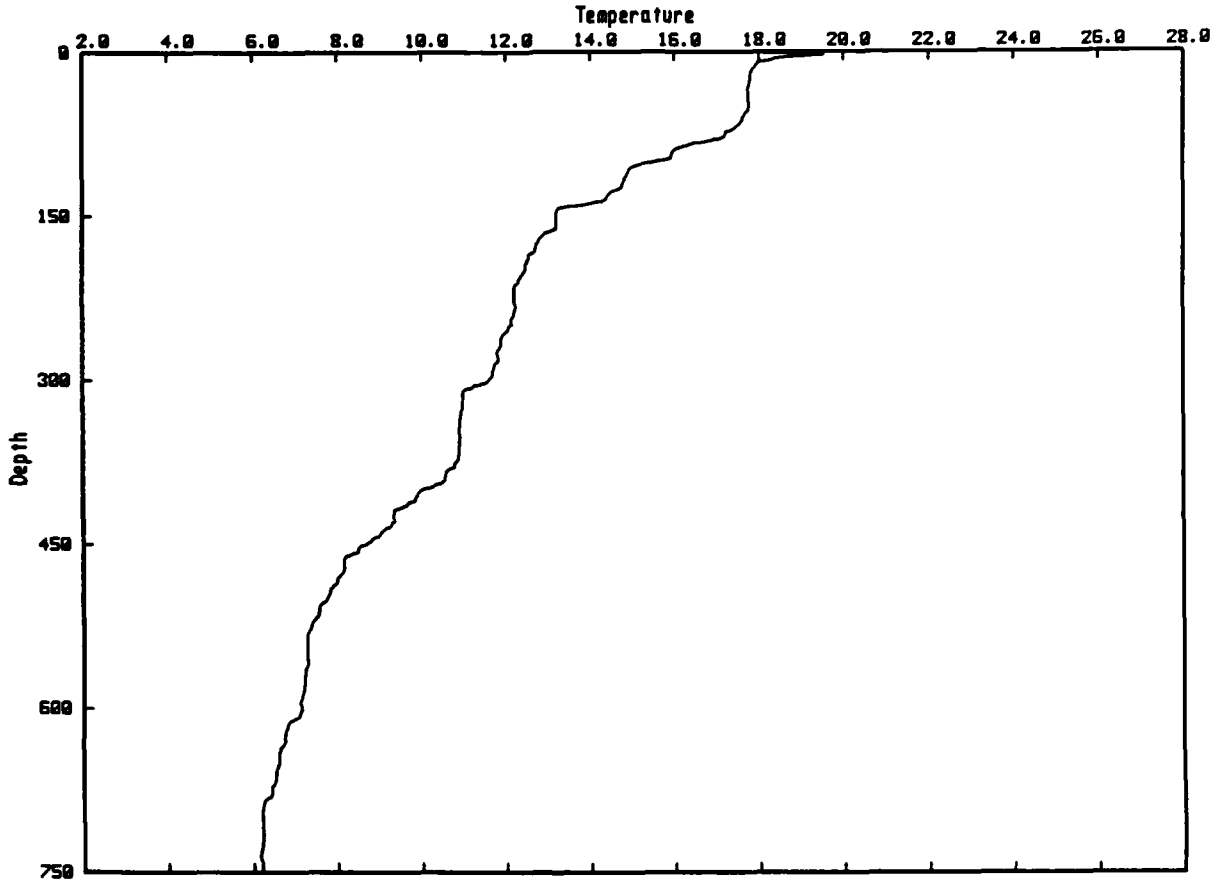
XBT DROP 070 28 18.5N 112 30.3W 21 NOV 84 1653 MST



XBT DROP 070 T-7 RADAR: none GULF COORDS: -34.4 204.7
JDAY 326 2353Z DEPTH 950m/950m SST 19.95 2M TEMPS: SAIL 20.09 XBT 19.66
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2B-9, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.3	200	13.2	390	9.2	580	6.9
20	18.5	210	12.9	400	9.2	591	6.6
30	18.1	220	12.6	411	9.2	601	6.6
40	17.8	230	12.5	420	9.1	610	6.6
50	17.3	240	12.4	430	8.9	620	6.5
60	17.2	250	12.2	440	8.1	630	6.4
70	17.1	260	11.9	450	8.2	640	6.2
80	16.4	270	11.1	460	7.6	650	6.1
90	15.8	280	11.0	470	7.5	660	6.1
100	15.4	290	11.0	480	7.5	670	6.0
110	15.2	299	10.9	490	7.4	680	6.1
120	14.7	310	10.8	500	7.4	690	6.0
130	14.4	320	10.8	510	7.4	700	6.0
140	14.2	330	10.6	520	7.4	710	5.9
151	14.0	343	10.4	530	7.4	720	5.9
160	13.9	350	10.1	541	7.3	729	5.9
170	13.8	360	9.3	550	7.1	740	5.8
180	13.7	370	9.3	561	7.0	749	5.8
190	13.5	380	9.3	569	7.0	760	5.8

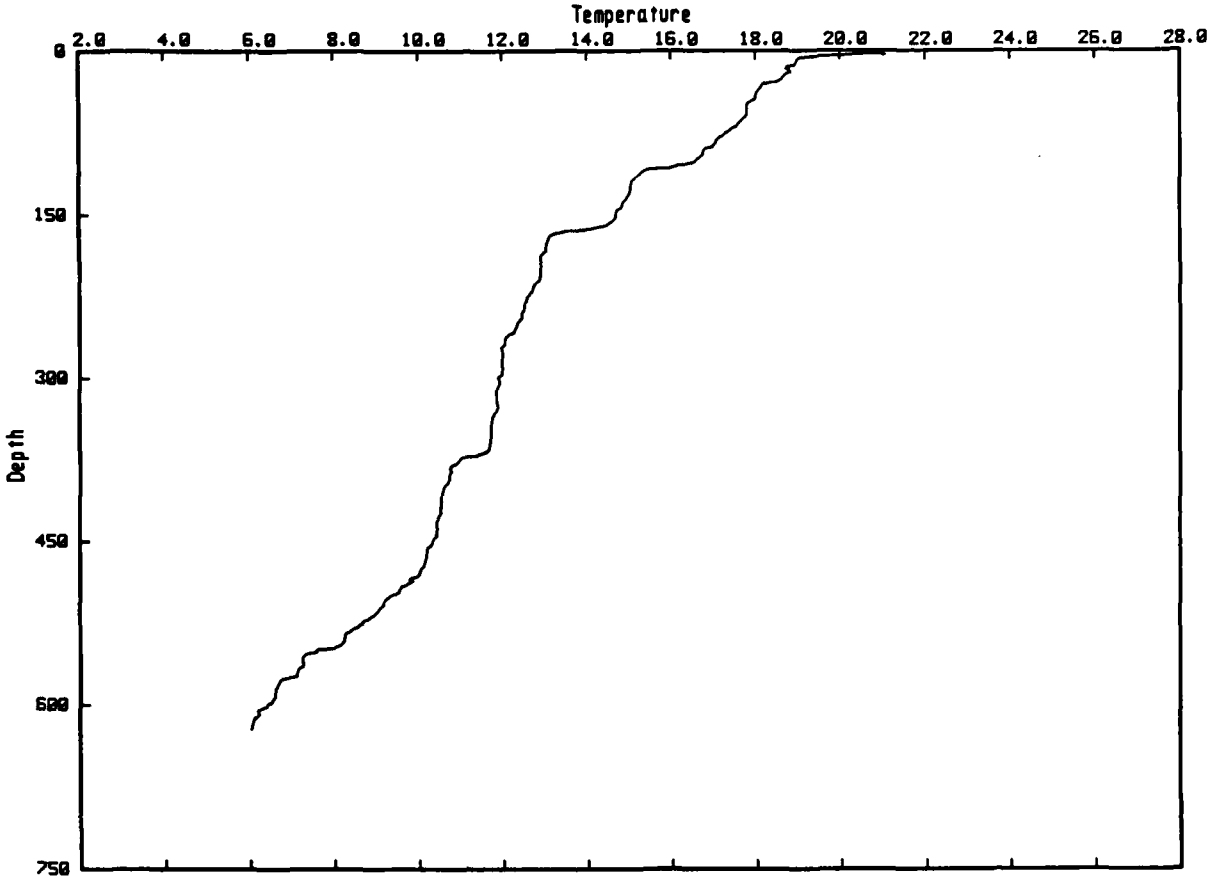
XBT DROP 072 28 20.5N 112 33.9W 21 NOV 84 1710 MST



XBT DROP 072 T-7 RADAR: none GULF COORDS: -37.0 211.1
JDAY 327 10Z DEPTH 810m/760m SST 18.90 2M TEMPS: SAIL 18.97 XBT 19.16
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2B-10, SPRING TIDE (POSITION APPROXIMATE)

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	18.0	200	12.5	391	10.6	581	7.2
20	17.8	210	12.3	400	10.0	591	7.1
31	17.8	221	12.2	410	9.9	599	7.1
39	17.8	231	12.2	419	9.4	610	7.0
49	17.8	240	12.2	430	9.3	619	6.8
60	17.6	250	12.1	440	9.0	629	6.8
70	17.4	260	11.9	450	8.7	639	6.6
80	17.0	271	11.9	460	8.3	651	6.6
91	16.0	279	11.8	470	8.2	659	6.5
100	15.5	291	11.7	480	8.0	670	6.5
110	14.9	300	11.6	490	7.8	681	6.4
121	14.8	310	11.0	500	7.8	688	6.3
131	14.4	319	11.0	510	7.6	699	6.2
140	13.9	331	10.9	520	7.4	709	6.2
149	13.2	341	10.9	530	7.3	721	6.2
159	13.2	349	10.9	541	7.3	734	6.2
170	12.8	363	10.9	549	7.3	741	6.2
180	12.7	370	10.9	560	7.3	747	6.2
190	12.5	380	10.7	569	7.2	758	6.2

XBT DROP 073 28 22.8N 112 34.8W 21 NOV 84 1725 MST

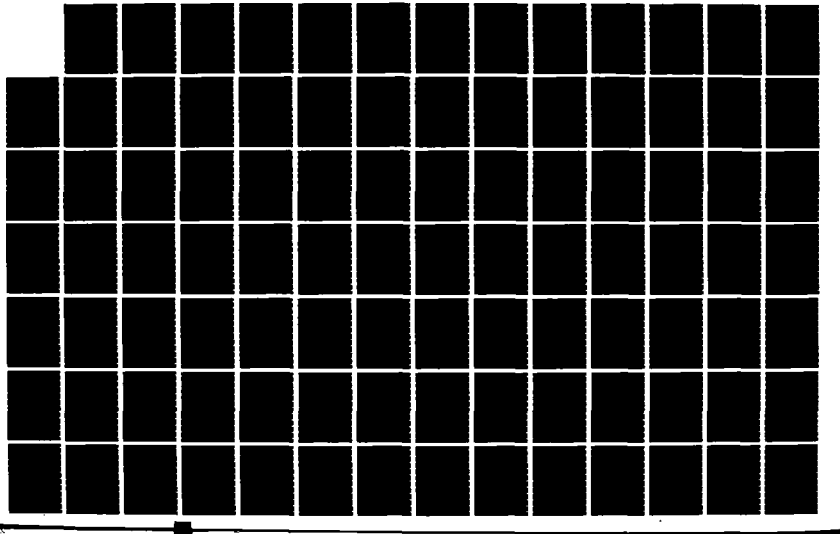


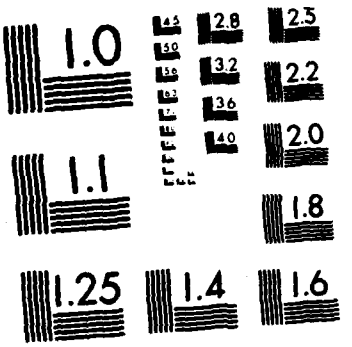
XBT DROP 073 T-7 RADAR: none GULF COORDS: -35.6 215.4
JDAY 327 25Z DEPTH 623m/623m SST 19.04 2M TEMPS: SAIL 19.12 XBT 20.38
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2B-11, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
11	19.0	199	12.9	389	10.7	581	6.7
20	18.8	210	12.9	401	10.6	590	6.6
30	18.2	220	12.7	410	10.6	600	6.4
40	18.0	231	12.5	421	10.5	610	6.2
50	17.8	239	12.5	431	10.4	619	6.1
60	17.7	250	12.3	439	10.4		
70	17.5	260	12.1	451	10.3		
80	17.1	270	12.0	459	10.2		
90	16.8	280	12.0	469	10.1		
100	16.6	291	12.0	480	10.0		
110	15.4	299	11.9	490	9.6		
121	15.1	309	11.9	500	9.3		
129	15.0	319	11.9	509	9.1		
140	14.9	329	11.9	520	8.9		
151	14.7	339	11.7	531	8.4		
160	14.4	350	11.7	540	8.2		
170	13.1	359	11.7	550	7.6		
179	13.0	370	11.4	560	7.2		
190	12.9	380	10.8	571	7.1		

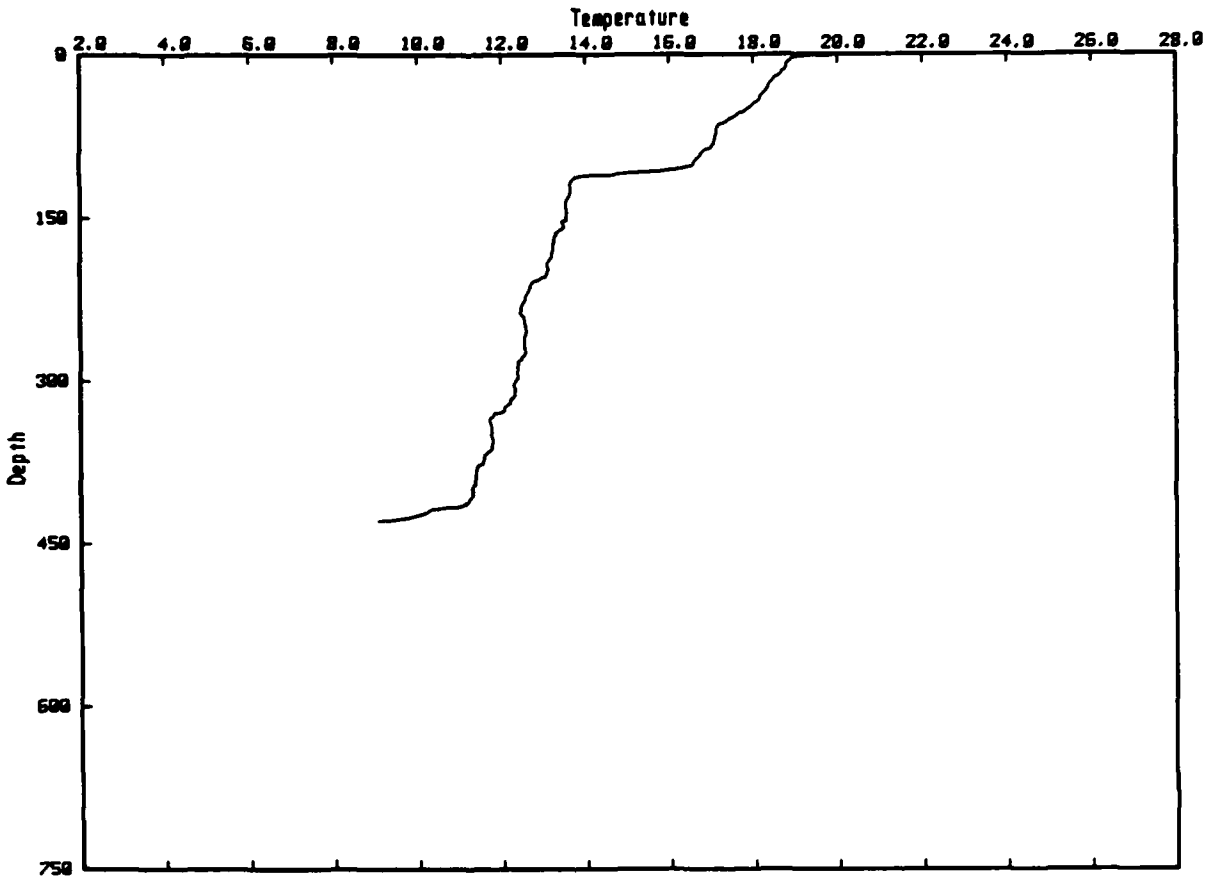
AD-A171 920 OBSERVATIONS OF TEMPERATURE FINESTRUCTURE IN THE GULF OF CALIFORNIA XBT D..(U) SCRIPPS INSTITUTION OF OCEANOGRAPHY LA JOLLA CA C A PADEN ET AL. MAR 85 2/3

UNCLASSIFIED SIO-REF-86-14 N00014-85-C-0104 F/G 8/10 NL





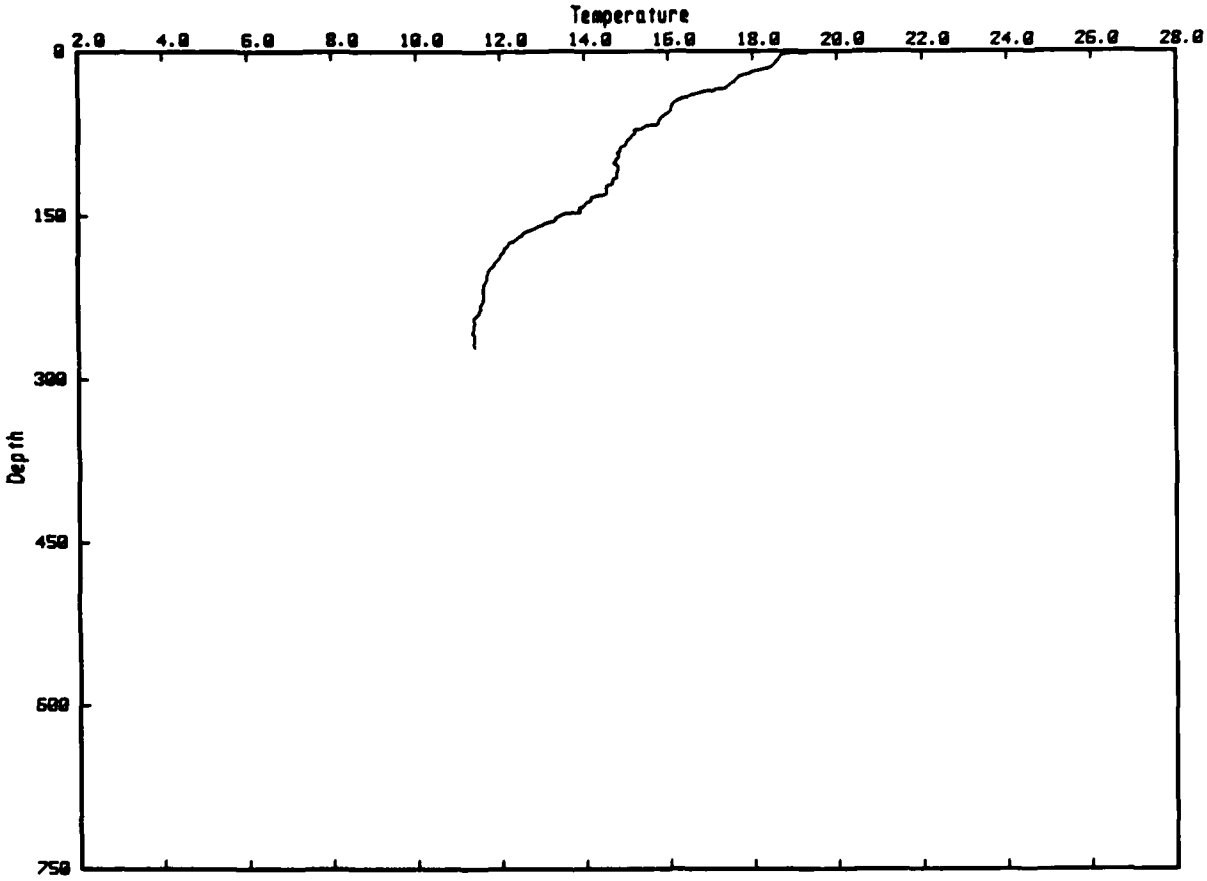
XBT DROP 074 28 24.7N 112 36.6W 21 NOV 84 1740 MST



XBT DROP 074 T-7 RADAR: none GULF COORDS: -35.9 220.0
JDAY 327 40Z DEPTH 429m/429m SST 19.08 2M TEMPS: SAIL 19.12 XBT 18.93
GULF OF CALIFORNIA: GUAYMAS BASIN, MX2B-12, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	18.8	200	13.1	391	11.4
20	18.6	211	12.7	400	11.3
30	18.4	220	12.6	410	11.2
40	18.2	230	12.5	420	10.2
50	17.9	240	12.5	429	9.1
60	17.4	250	12.6		
69	17.1	260	12.6		
81	17.1	271	12.6		
90	16.8	280	12.5		
100	16.6	291	12.4		
110	14.8	300	12.3		
120	13.6	310	12.3		
131	13.6	320	12.2		
141	13.5	330	11.8		
150	13.5	340	11.7		
161	13.5	350	11.7		
171	13.3	359	11.8		
180	13.2	370	11.6		
190	13.1	379	11.4		

XBT DROP 075 28 25.9N 112 36.3W 21 NOV 84 1754 MST



XBT DROP 075 T-7 RADAR: none GULF COORDS: -34.2 221.5
JDAY 327 54Z DEPTH 281m/271m SST 18.82 2M TEMPS: SAIL 18.78 XBT 18.71
GULF OF CALIFORNIA: GUAYMAS BASIN, END MX2B LINE; MX2B-13, SPRING TIDE

Z	TEMP	Z	TEMP
7	18.6	200	11.7
20	18.0	210	11.7
30	17.5	221	11.6
40	16.5	230	11.6
50	16.1	240	11.5
60	15.8	250	11.4
70	15.4	261	11.4
80	15.1	270	11.4
90	14.9		
100	14.8		
110	14.8		
120	14.7		
130	14.5		
141	14.0		
150	13.4		
160	12.9		
170	12.4		
180	12.1		
190	12.0		

Ballenas Channel

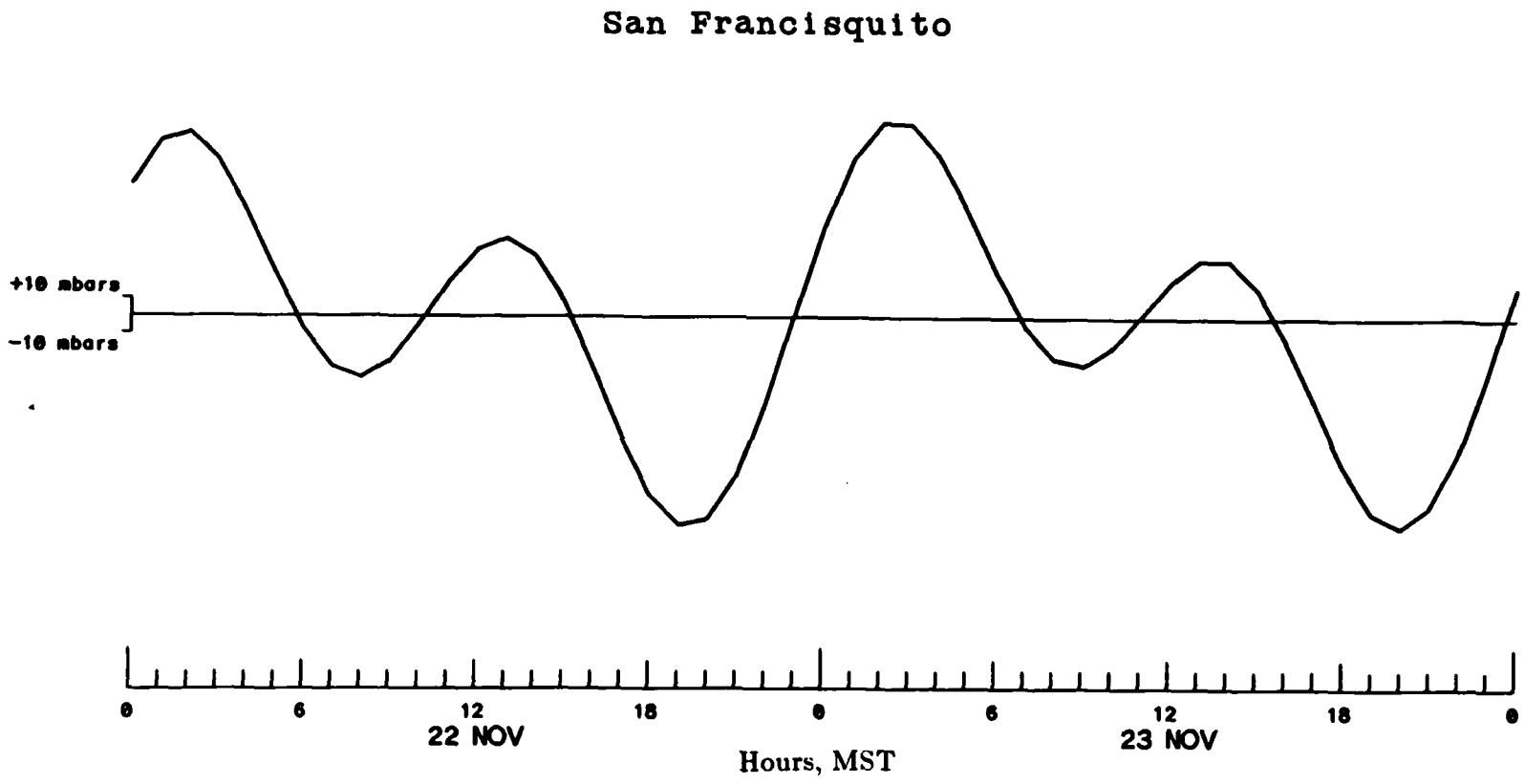


Figure 14. Bottom Pressure at San Francisquito Bay. 22-23 November 1984.

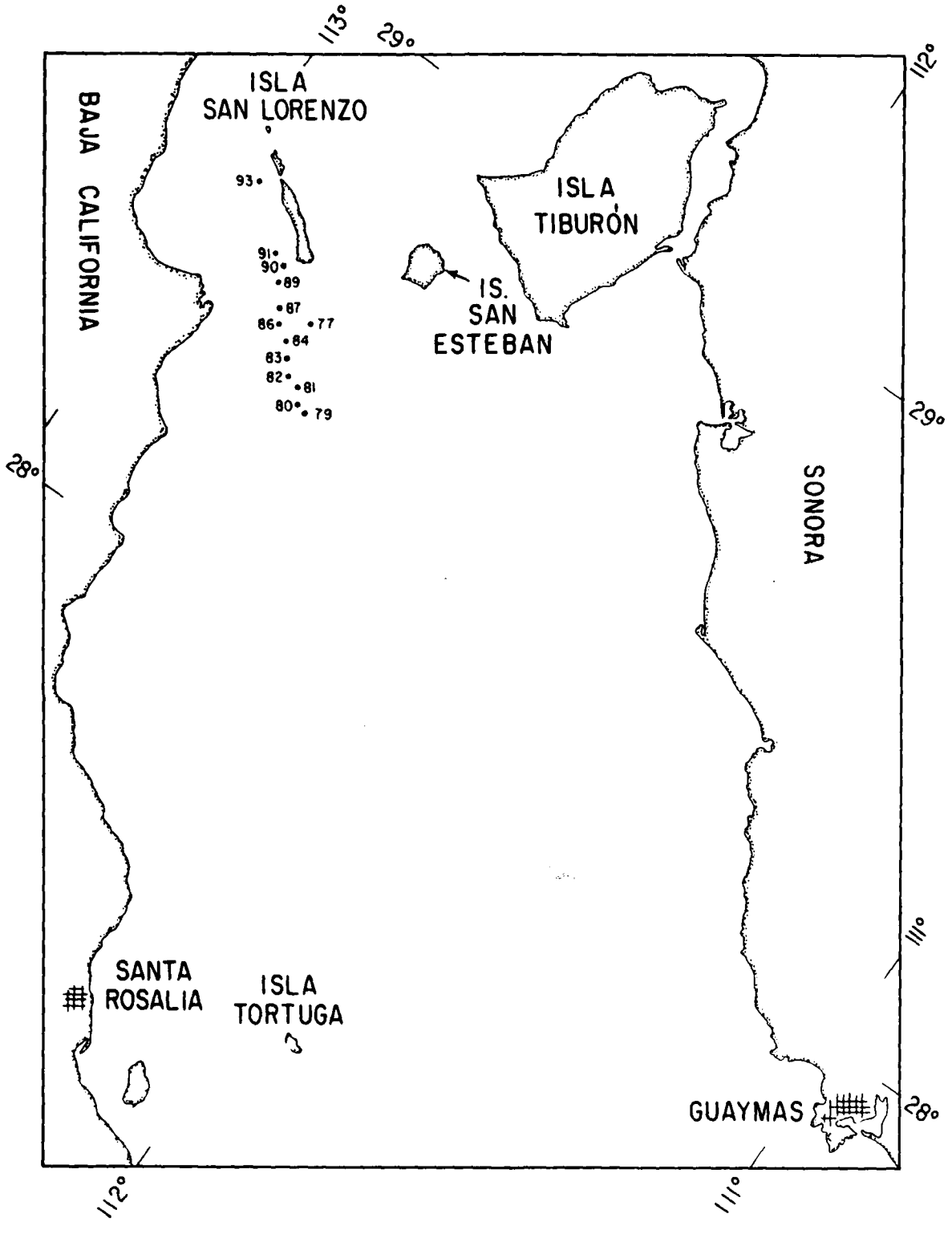
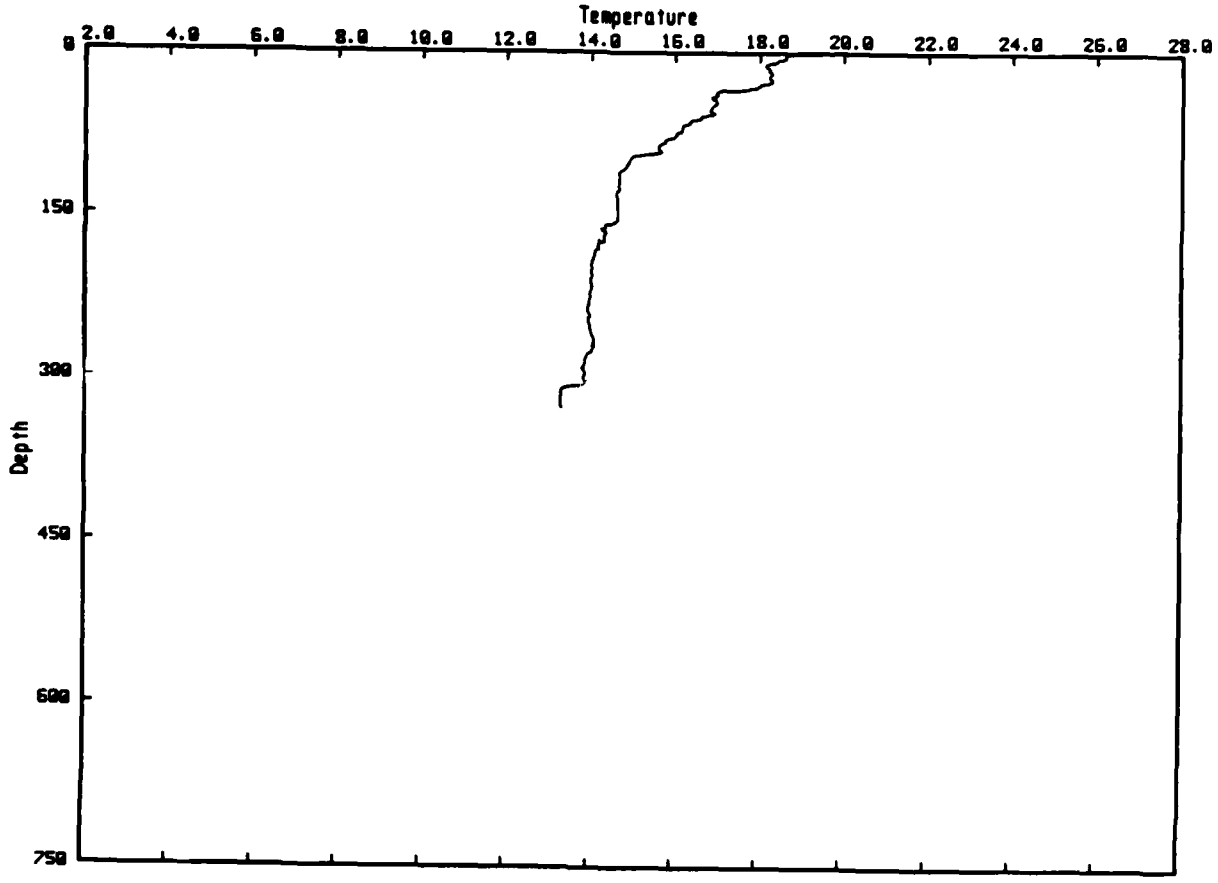


Figure 15. AXBT1 Section: XBT Station Locations

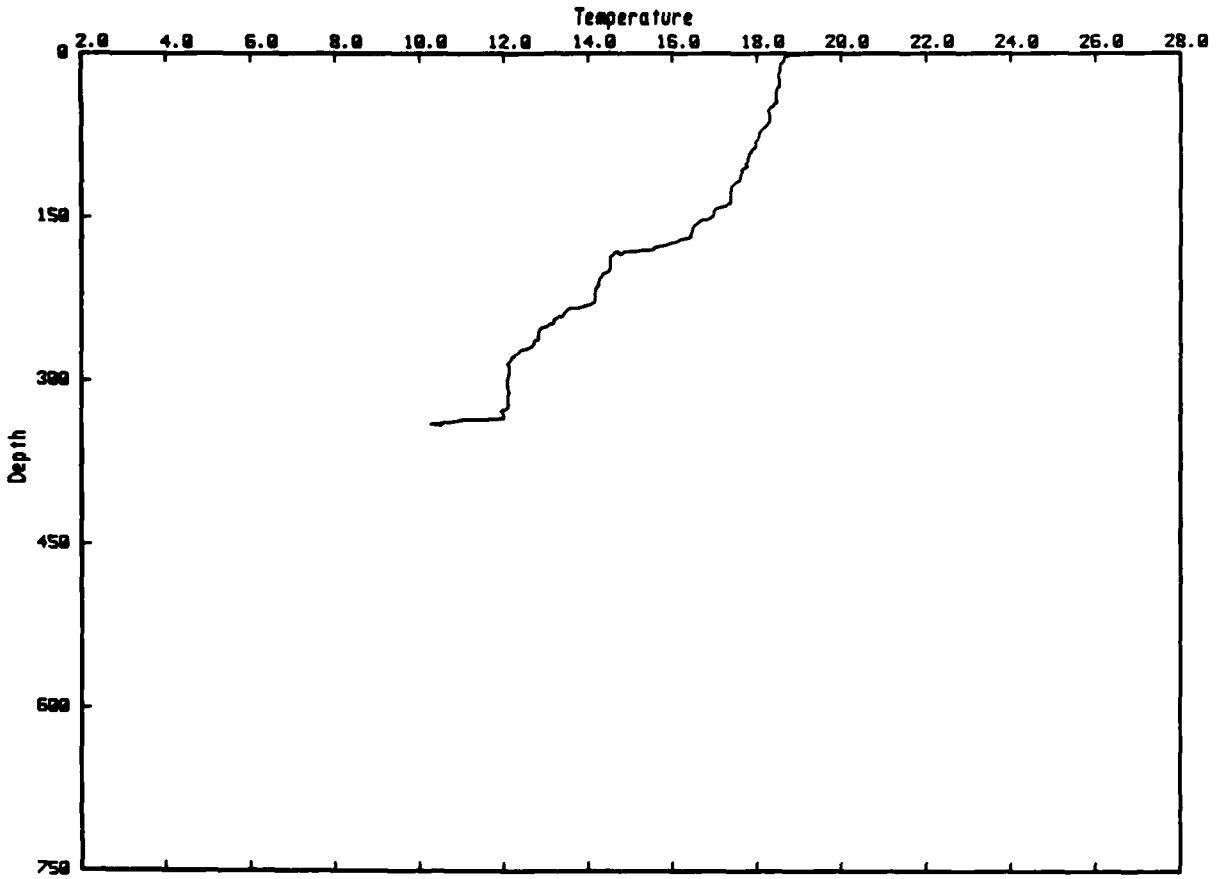
XBT DROP 077 28 30.0N 112 41.3W 22 NOV 84 2318 MST



XBT DROP 077 T-4 RADAR: none GULF COORDS: -36.4 232.4
JDAY 328 618Z DEPTH 328m/328m SST .00 2M TEMPS: SAIL 18.65 XBT 18.63
GULF OF CALIFORNIA: ON CTD STATION PC6080

Z	TEMP	Z	TEMP
10	18.2	200	14.0
20	18.3	211	14.0
30	18.0	219	14.0
40	17.0	230	14.0
50	16.9	240	14.0
60	16.6	250	14.0
70	16.2	260	14.0
80	15.8	270	14.0
90	15.6	280	13.9
100	14.9	290	13.8
110	14.7	301	13.8
121	14.7	310	13.3
130	14.6	320	13.3
140	14.6	327	13.3
151	14.6		
160	14.3		
170	14.3		
180	14.2		
190	14.1		

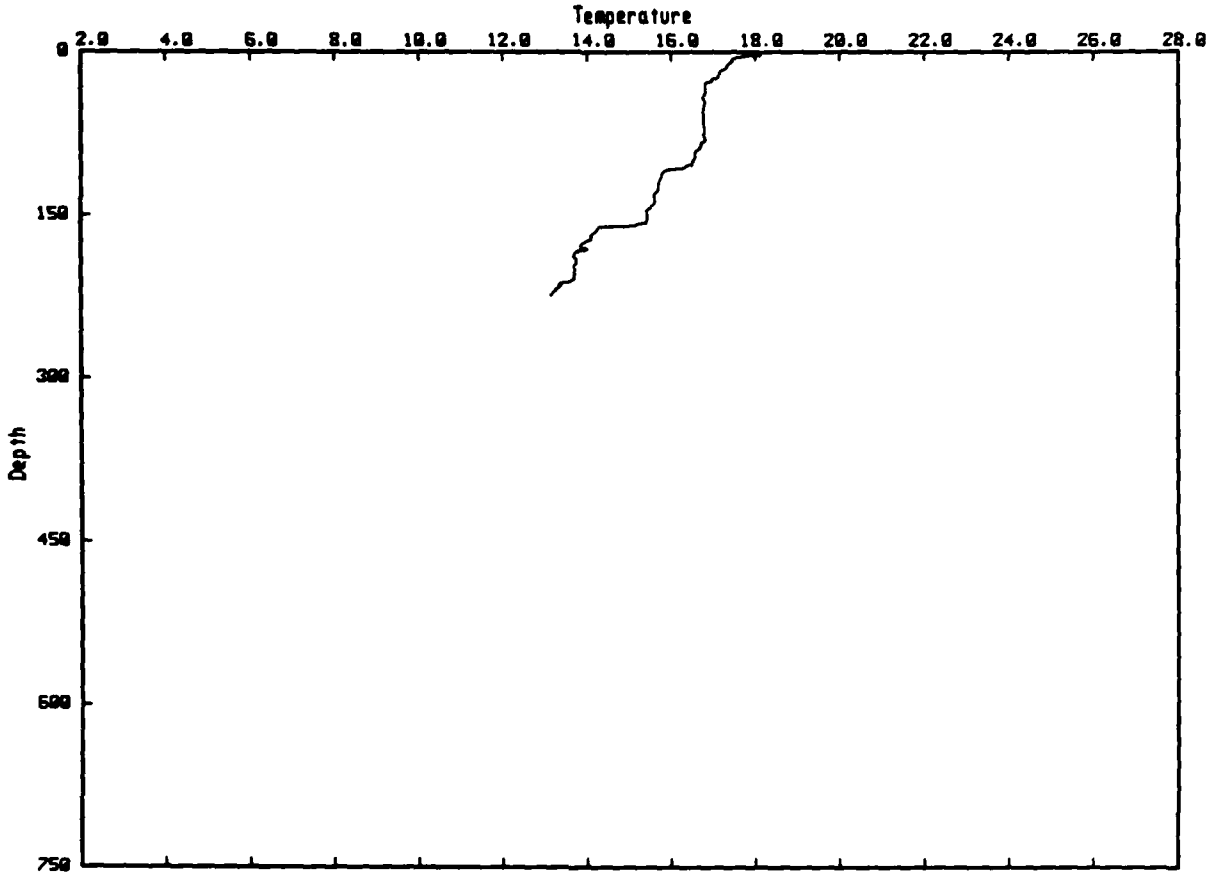
XBT DROP 079 28 21.8N 112 35.6W 23 NOV 84 0416 MST



XBT DROP 079 T-7 RADAR: none GULF COORDS: -37.8 214.7
JDAY 328 1116Z DEPTH 342m/342m SST 17.86 2M TEMPS: SAIL 18.61 XBT 18.66
GULF OF CALIFORNIA: BEGIN AXBT1 LINE, AXBT1-1, SPRING TIDE

Z	TEMP	Z	TEMP
10	18.6	200	14.5
20	18.5	210	14.2
30	18.6	220	14.1
40	18.4	230	14.1
50	18.3	240	13.4
60	18.3	250	13.0
70	18.1	260	12.8
80	18.0	270	12.6
90	17.9	280	12.2
100	17.7	291	12.1
110	17.6	301	12.1
120	17.5	309	12.1
129	17.4	320	12.1
140	17.3	330	12.0
151	16.9	340	10.4
160	16.5		
170	16.2		
180	15.3		
189	14.5		

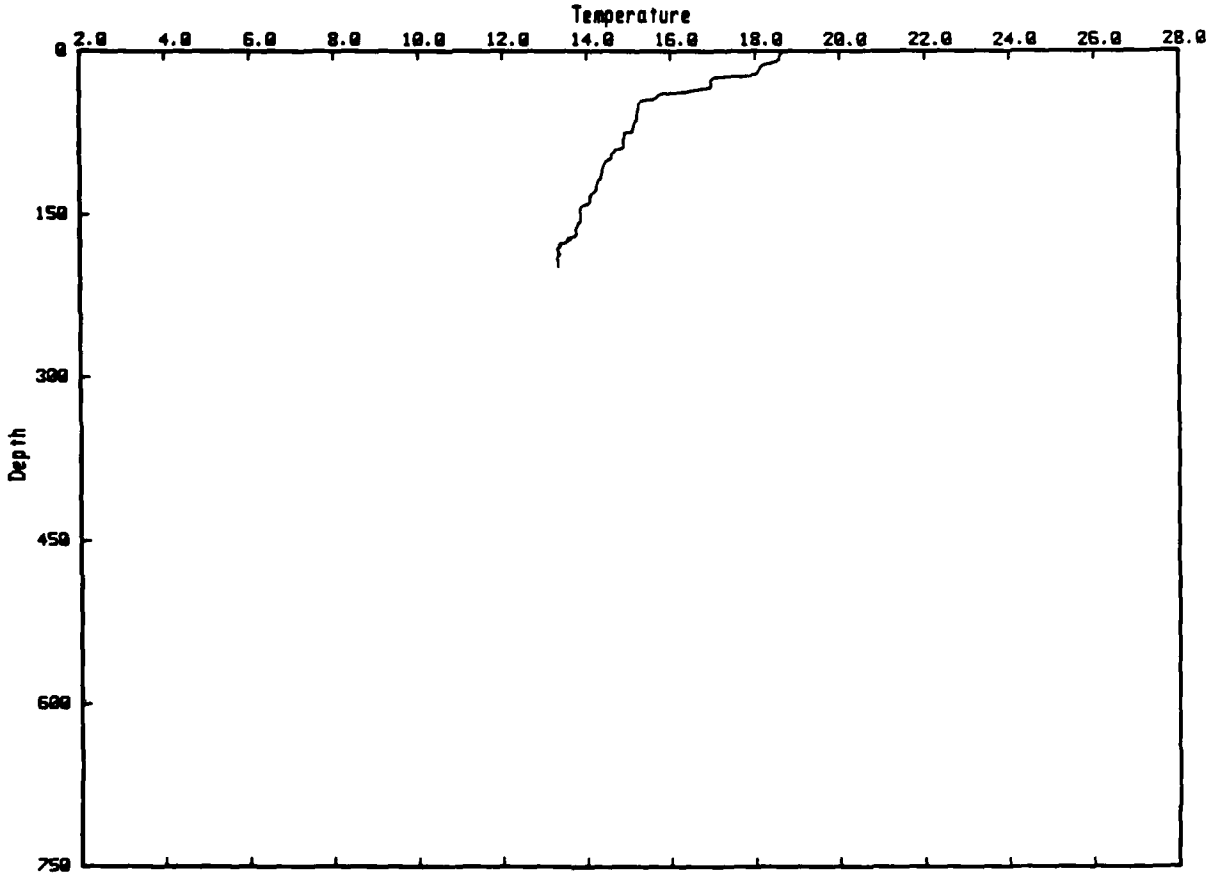
XBT DROP 080 28 22.0N 112 36.8W 23 NOV 84 0427 MST



XBT DROP 080 T-7 RADAR: none GULF COORDS: -39.2 216.2
JDAY 328 1127Z DEPTH 224m/224m SST 17.95 2M TEMPS: SAIL 18.43 XBT 17.74
GULF OF CALIFORNIA: AXBT1-2, SPRING TIDE

Z	TEMP	Z	TEMP
10	17.4	200	13.7
20	17.1	210	13.6
30	16.8	220	13.2
41	16.8		
53	16.8		
60	16.8		
71	16.8		
81	16.8		
90	16.6		
100	16.5		
110	15.8		
120	15.7		
130	15.6		
140	15.6		
150	15.4		
160	14.9		
170	14.1		
180	13.9		
190	13.7		

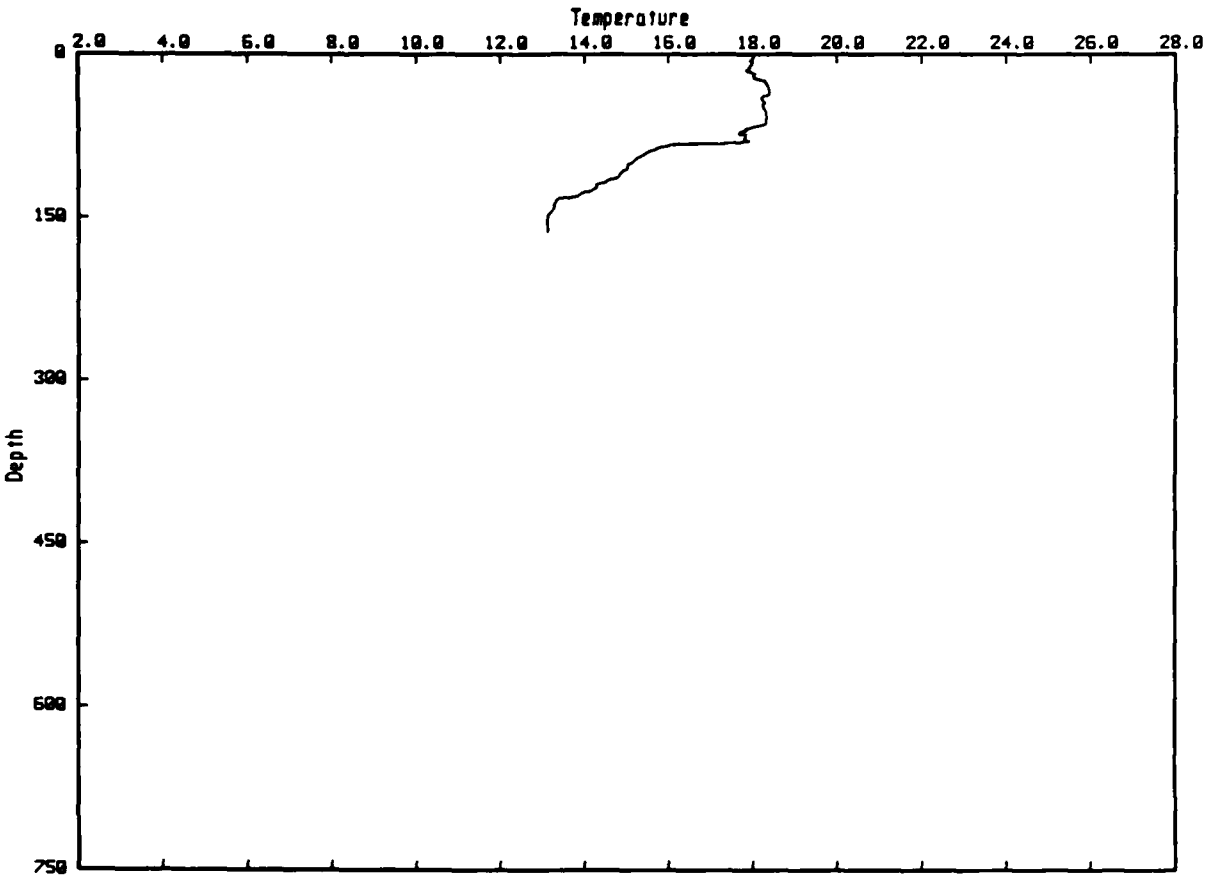
XBT DROP 081 28 23.5N 112 38.0W 23 NOV 84 0439 MST



XBT DROP 081 T-7 RADAR: none GULF COORDS: -39.1 219.6
JDAY 328 1139Z DEPTH 200m/200m SST 17.88 2M TEMPS: SAIL 18.48 XBT 18.61
GULF OF CALIFORNIA: AXBT1-3, SPRING TIDE

Z	TEMP	Z	TEMP
10	18.5	199	13.3
20	18.1		
31	17.0		
40	15.7		
50	15.2		
60	15.2		
69	15.1		
80	14.9		
90	14.8		
100	14.5		
110	14.4		
120	14.3		
130	14.2		
140	14.0		
151	13.9		
160	13.8		
170	13.7		
180	13.4		
190	13.3		

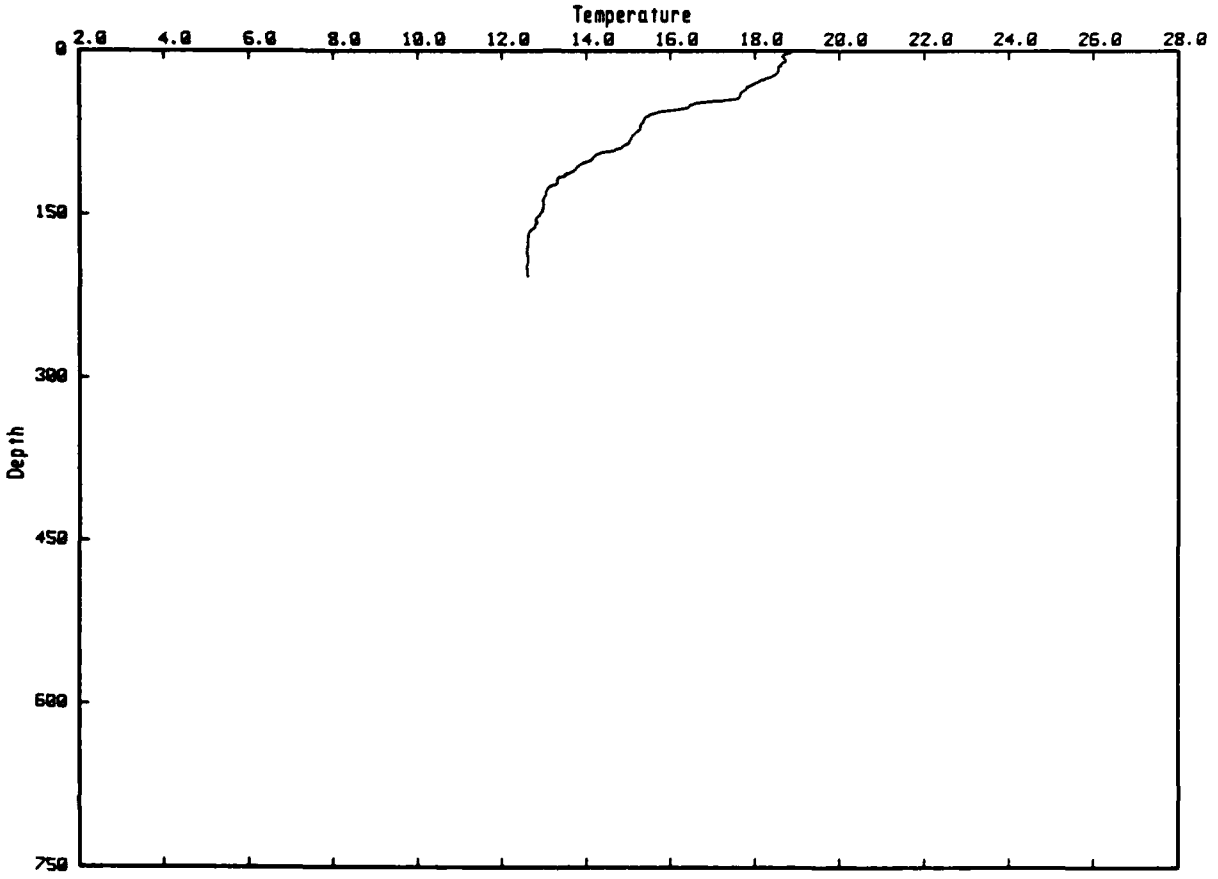
XBT DROP 082 28 24.0N 112 39.8W 23 NOV 84 0451 MST



XBT DROP 082 T-4 RADAR: none GULF COORDS: -41.0 222.0
JDAY 328 1151Z DEPTH 165m/162m SST 17.84 2M TEMPS: SAIL 18.15 XBT 18.00
GULF OF CALIFORNIA: AXBT1-4, SPRING TIDE

Z	TEMP
10	18.0
20	18.0
30	18.4
40	18.2
50	18.3
60	18.3
70	17.8
80	17.8
90	15.5
100	15.1
110	14.8
120	14.3
130	13.8
140	13.3
150	13.1
160	13.1

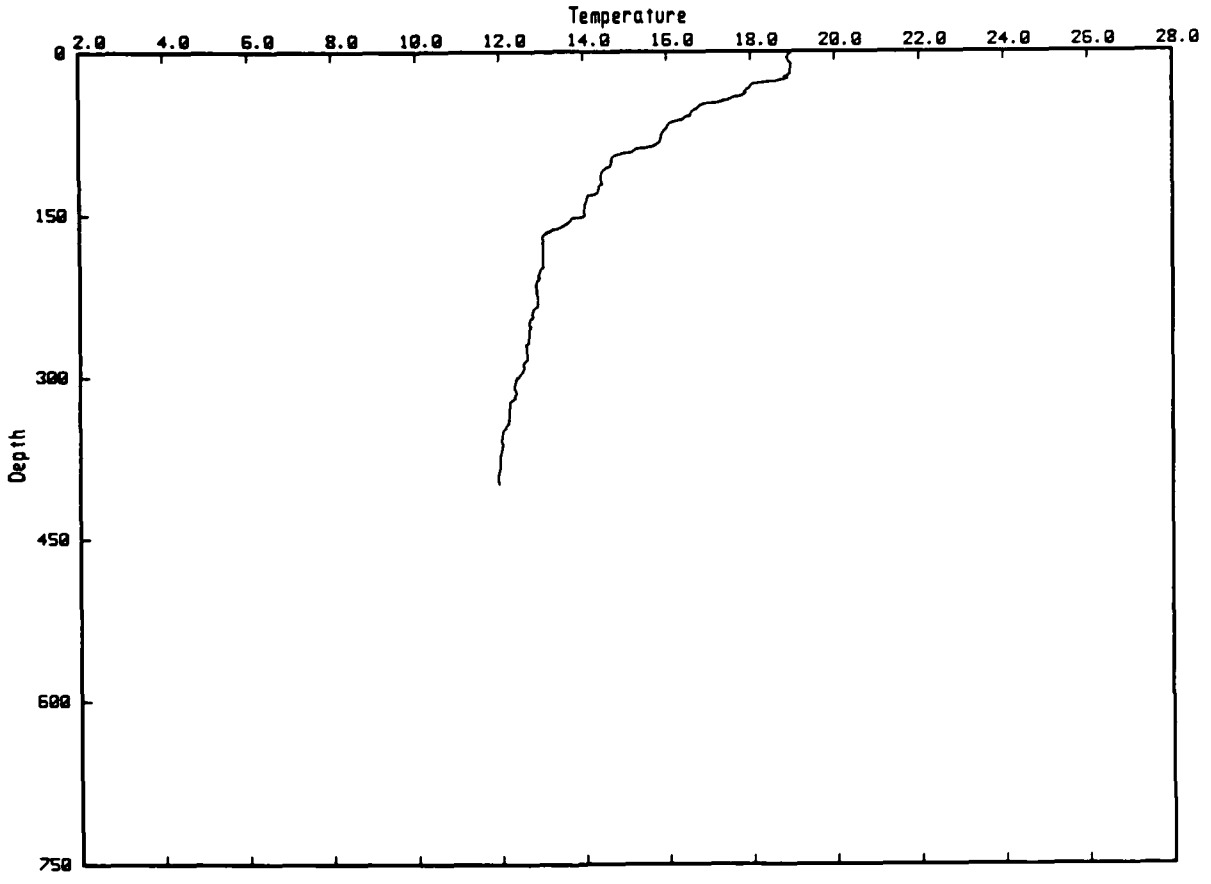
XBT DROP 083 28 25.4N 112 41.1W 23 NOV 84 0503 MST



XBT DROP 083 T-4 RADAR: none GULF COORDS: -41.1 225.4
JDAY 328 1203Z DEPTH 208m/208m SST 18.16 2M TEMPS: SAIL 18.70 XBT 18.68
GULF OF CALIFORNIA: AXBT1-5, SPRING TIDE

Z	TEMP	Z	TEMP
10	18.7	200	12.6
20	18.5	207	12.6
30	18.0		
40	17.6		
50	16.5		
60	15.4		
70	15.3		
81	15.1		
90	14.7		
100	14.1		
110	13.7		
120	13.3		
130	13.0		
139	13.0		
150	12.9		
160	12.8		
170	12.6		
180	12.6		
191	12.6		

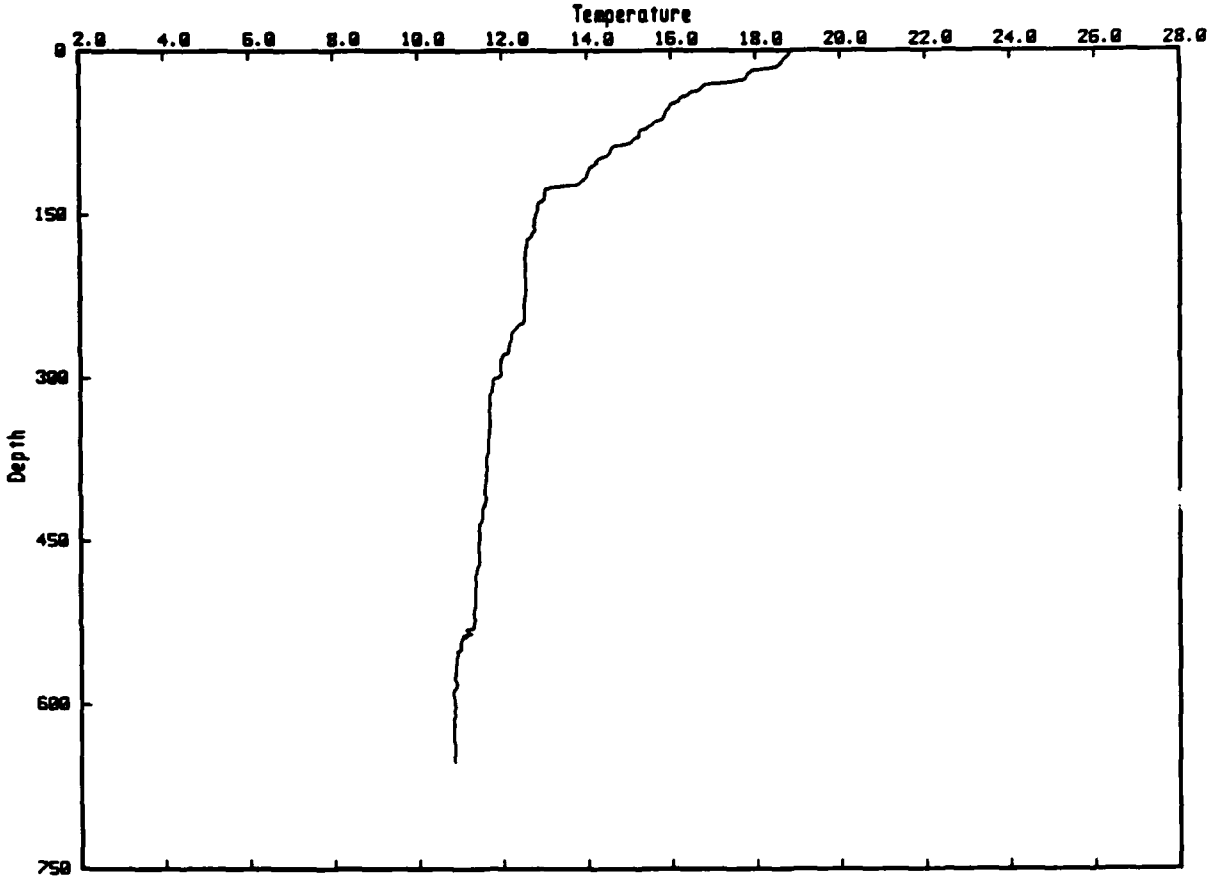
XBT DROP 084 28 26.9N 112 42.5W 23 NOV 84 0515 MST



XBT DROP 084 T-4 RADAR: none GULF COORDS: -41.3 229.0
JDAY 328 1215Z DEPTH 400m/400m SST 18.74 2M TEMPS: SAIL 18.90 XBT 18.89
GULF OF CALIFORNIA: AXBT1-6, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	18.9	200	13.0	390	12.0
20	19.0	210	12.9	399	12.0
30	18.1	220	12.9		
40	17.8	230	12.9		
50	16.8	240	12.8		
60	16.5	250	12.7		
69	16.0	260	12.7		
81	15.9	270	12.6		
90	15.3	280	12.6		
100	14.7	290	12.6		
110	14.5	300	12.4		
119	14.4	309	12.4		
130	14.3	320	12.4		
141	14.0	330	12.2		
150	14.0	340	12.2		
160	13.6	350	12.1		
170	13.0	359	12.0		
180	13.0	370	12.0		
190	13.0	381	12.0		

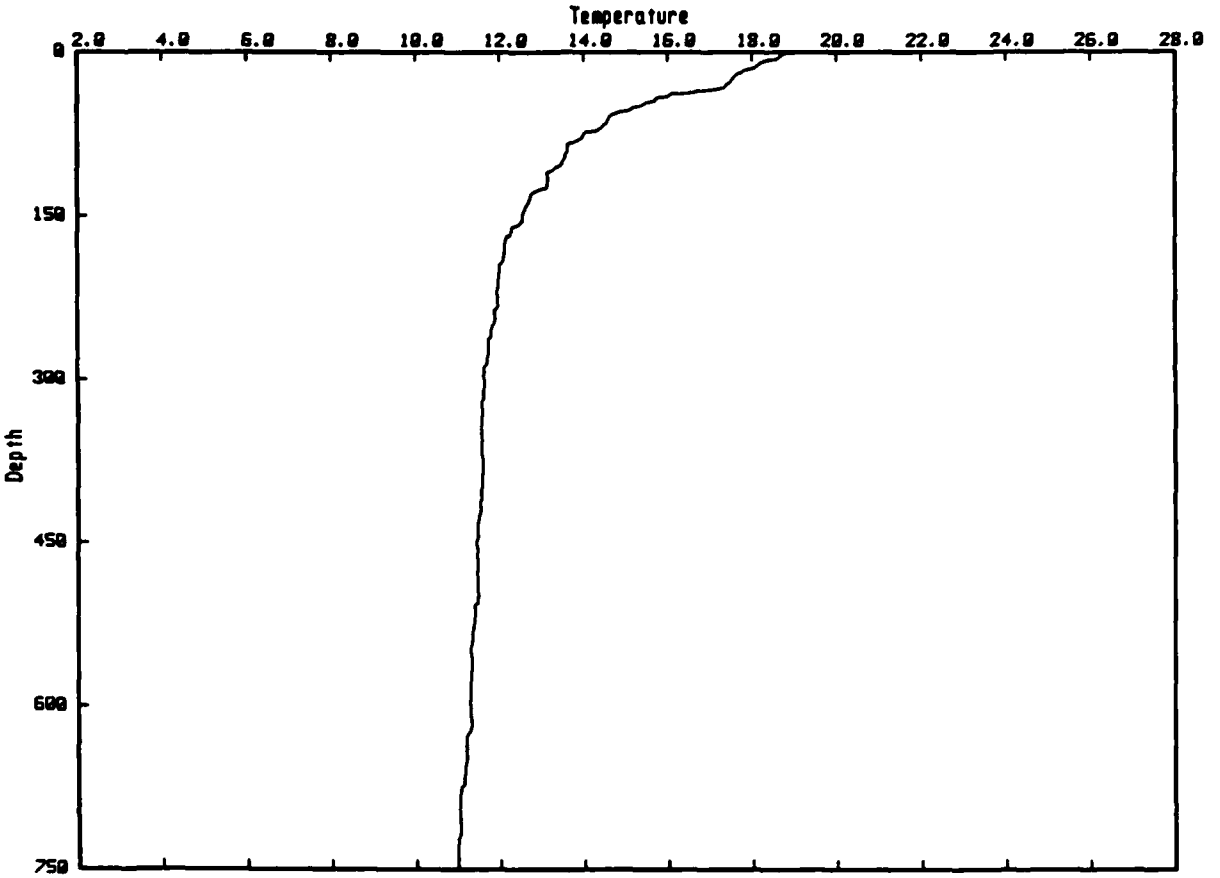
XBT DROP 086 28 28.0N 112 44.4W 23 NOV 84 0532 MST



XBT DROP 086 T-7 RADAR: none GULF COORDS: -42.7 232.4
JDAY 328 1232Z DEPTH 654m/654m SST 18.50 2M TEMPS: SAIL 18.69 XBT 18.81
GULF OF CALIFORNIA: AXBT1-7, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
9	18.6	200	12.5	389	11.6	579	10.9
20	17.9	210	12.5	400	11.6	589	10.8
30	17.3	221	12.6	411	11.6	600	10.8
40	16.4	230	12.5	420	11.5	610	10.9
50	16.0	241	12.5	430	11.5	620	10.8
60	15.8	250	12.5	440	11.4	630	10.8
70	15.5	260	12.2	450	11.4	641	10.8
80	15.2	270	12.2	461	11.4	650	10.8
90	14.6	279	12.0	470	11.4		
100	14.2	289	11.9	479	11.4		
110	14.1	300	11.9	490	11.4		
120	13.9	310	11.7	500	11.3		
131	13.0	319	11.7	510	11.3		
140	12.9	330	11.7	521	11.3		
150	12.8	340	11.7	530	11.3		
160	12.7	351	11.7	540	11.0		
170	12.7	359	11.7	550	11.0		
180	12.6	369	11.6	560	10.9		
190	12.5	379	11.6	570	10.9		

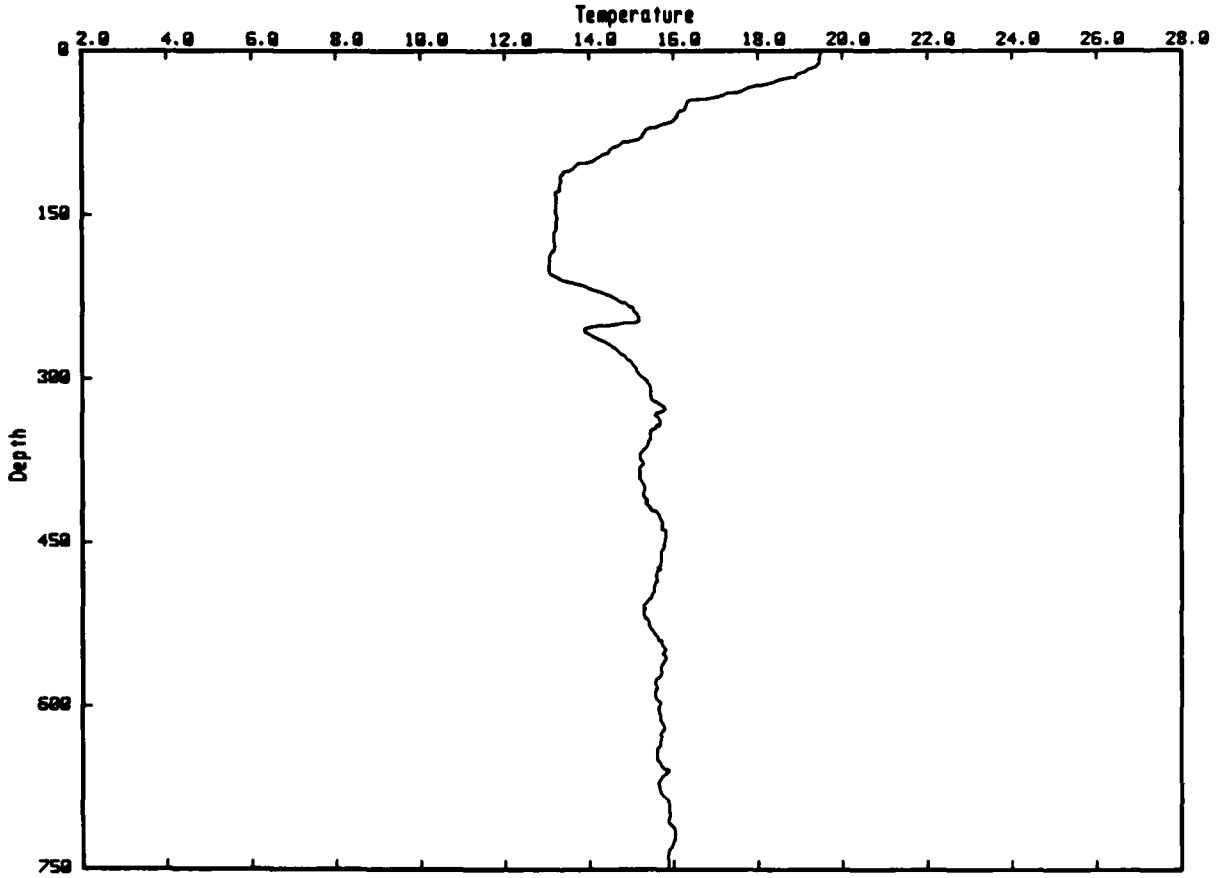
XBT DROP 087 28 29.5N 112 45.5W 23 NOV 84 0544 MST



XBT DROP 087 T-7 RADAR: none GULF COORDS: -42.5 235.7
JDAY 328 1244Z DEPTH 936m/936m SST 18.38 2M TEMPS: SAIL 18.78 XBT 18.68
GULF OF CALIFORNIA: AXBT1-8, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	18.2	200	12.0	389	11.6	582	11.3
20	17.6	210	12.0	401	11.6	590	11.3
30	17.4	221	11.9	410	11.6	599	11.3
40	16.0	230	12.0	420	11.6	609	11.3
50	15.3	240	11.9	430	11.5	620	11.3
59	14.6	251	11.8	440	11.5	629	11.2
70	14.4	260	11.8	451	11.4	641	11.2
80	13.9	270	11.7	460	11.5	652	11.2
90	13.6	279	11.7	468	11.5	661	11.2
100	13.5	289	11.6	479	11.5	670	11.1
110	13.2	299	11.6	491	11.5	680	11.1
121	13.1	309	11.6	501	11.5	692	11.1
130	12.8	320	11.6	510	11.4	701	11.0
141	12.8	329	11.6	521	11.4	710	11.1
150	12.6	339	11.6	530	11.4	720	11.0
160	12.4	349	11.6	541	11.3	731	11.0
170	12.2	361	11.6	550	11.3	740	11.0
180	12.1	371	11.6	559	11.3	750	11.0
189	12.1	379	11.6	571	11.3	760	11.0

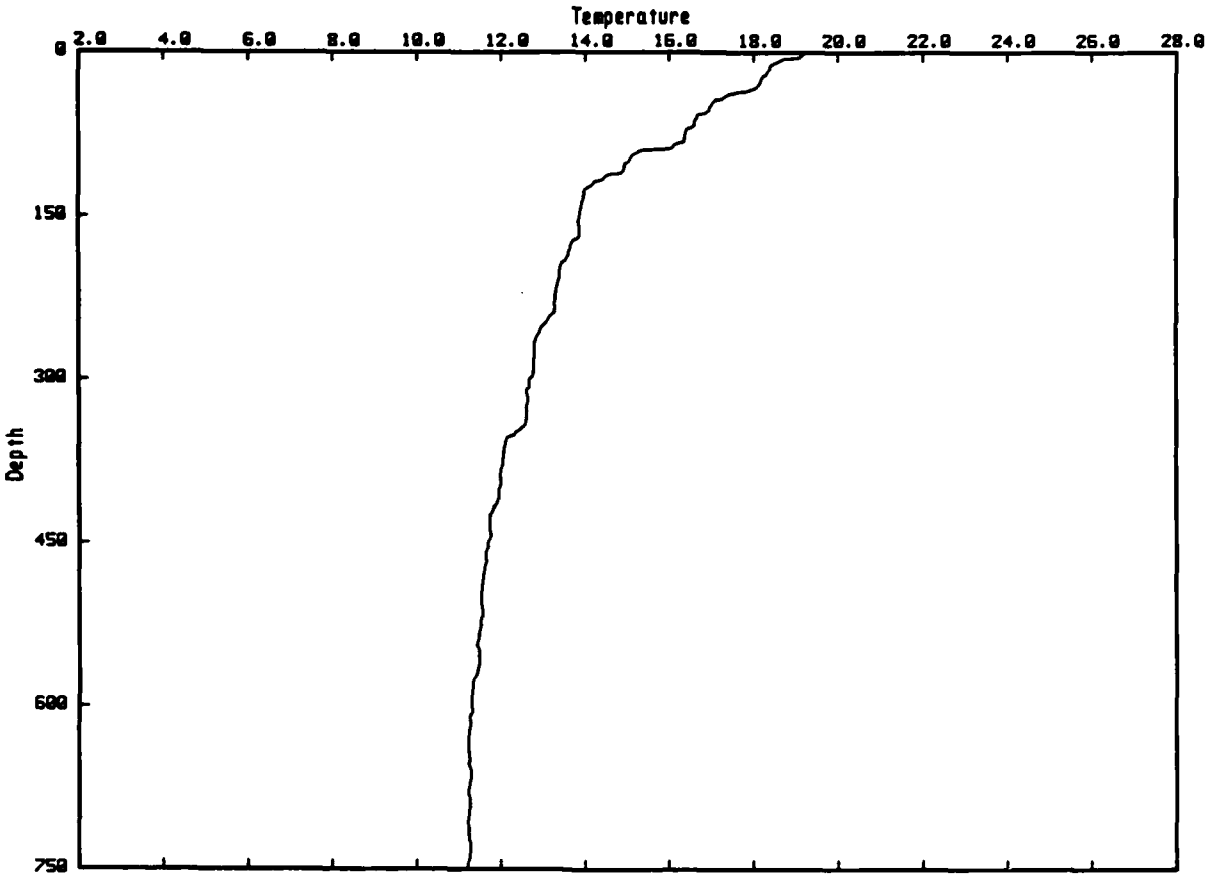
XBT DROP 089 28 31.7N 112 47.5W 23 NOV 84 0600 MST



XBT DROP 089 T-7 RADAR: none GULF COORDS: -42.7 240.9
JDAY 328 1300Z DEPTH 969m/760m SST 19.13 2M TEMPS: SAIL 19.23 XBT 19.49
GULF OF CALIFORNIA: AXBT1-9, SPRING TIDE (BAD BELOW 200M?)

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
9	19.5	200	13.1	390	15.2	580	15.6
20	19.1	210	13.3	400	15.3	591	15.6
30	18.2	220	14.2	411	15.4	600	15.6
40	17.2	230	14.8	420	15.4	609	15.7
50	16.3	240	15.1	430	15.7	621	15.8
60	16.1	250	14.6	440	15.8	630	15.7
70	15.5	260	14.1	450	15.8	640	15.6
80	15.2	270	14.6	460	15.7	650	15.6
89	14.5	280	14.9	469	15.7	660	15.9
100	14.1	290	15.1	480	15.6	670	15.6
110	13.4	300	15.3	490	15.5	681	15.7
120	13.3	309	15.5	500	15.5	689	15.9
130	13.2	320	15.5	510	15.4	700	15.9
140	13.2	330	15.7	519	15.4	710	16.0
149	13.2	340	15.7	530	15.5	720	16.0
159	13.2	350	15.4	540	15.7	730	15.9
169	13.2	360	15.4	550	15.7	741	15.9
180	13.2	369	15.2	560	15.7	750	15.9
190	13.1	380	15.2	570	15.7	760	15.7

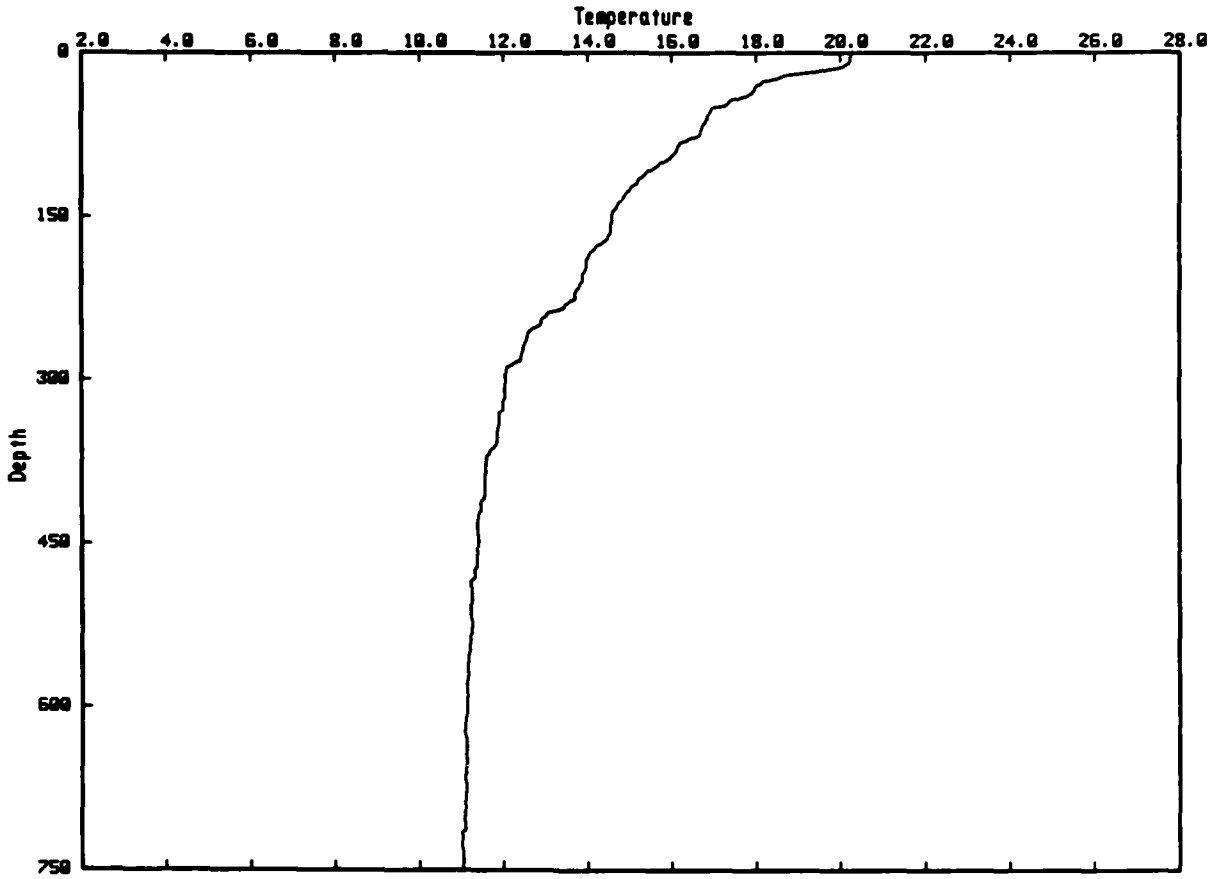
XBT DROP 090 28 33.4N 112 48.1W 23 NOV 84 0615 MST



XBT DROP 090 T-7 RADAR: none GULF COORDS: -41.6 244.1
JDAY 328 1315Z DEPTH 929m/929m SST 18.83 2M TEMPS: SAIL 19.22 XBT 19.12
GULF OF CALIFORNIA: AXBT1-10, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	18.5	201	13.4	391	12.0	579	11.3
20	18.3	210	13.4	400	12.0	590	11.3
30	18.1	220	13.3	410	11.9	601	11.3
40	17.4	230	13.3	420	11.8	610	11.3
50	17.0	240	13.2	431	11.7	619	11.3
60	16.7	250	13.0	441	11.7	630	11.2
70	16.5	261	12.9	451	11.7	639	11.2
80	16.4	268	12.8	461	11.6	651	11.2
90	15.3	282	12.8	468	11.6	659	11.3
100	15.0	292	12.8	481	11.6	671	11.2
110	14.9	300	12.7	491	11.6	680	11.2
120	14.2	310	12.6	501	11.5	690	11.3
130	14.0	321	12.6	509	11.6	698	11.2
139	13.9	331	12.6	519	11.5	710	11.2
149	13.9	341	12.6	531	11.5	720	11.2
160	13.9	351	12.3	541	11.4	730	11.3
170	13.8	360	12.1	549	11.5	741	11.2
180	13.6	370	12.1	559	11.5	749	11.2
190	13.5	381	12.0	569	11.4	761	11.2

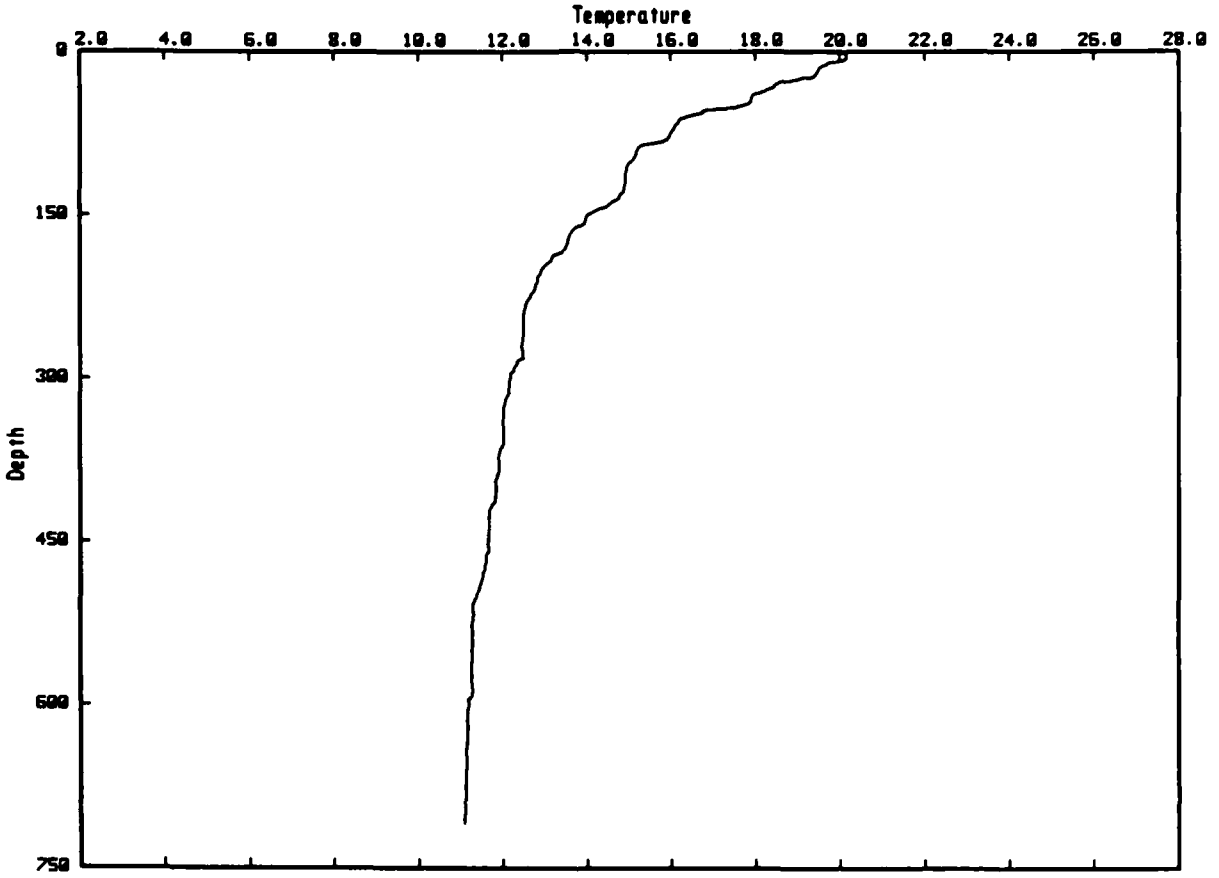
XBT DROP 091 28 34.1N 112 49.9W 23 NOV 84 0630 MST



XBT DROP 091 T-7 RADAR: none GULF COORDS: -43.2 246.8
JDAY 328 1330Z DEPTH 812m/812m SST 19.94 2M TEMPS: SAIL 20.28 XBT 20.24
GULF OF CALIFORNIA: AXBT1-11, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.2	200	13.9	390	11.6	580	11.1
20	18.9	210	13.9	400	11.6	590	11.1
30	18.0	220	13.7	410	11.5	599	11.1
40	17.7	230	13.6	419	11.5	610	11.1
50	17.1	240	13.0	431	11.4	619	11.1
60	16.9	250	12.9	439	11.4	630	11.1
70	16.7	260	12.6	451	11.4	639	11.1
80	16.4	270	12.5	461	11.4	650	11.1
90	16.1	280	12.4	470	11.4	661	11.1
100	15.7	290	12.1	480	11.3	670	11.1
110	15.4	300	12.1	490	11.2	679	11.1
120	15.1	309	12.0	500	11.2	690	11.1
130	14.9	321	12.0	509	11.2	700	11.1
140	14.7	330	11.9	520	11.2	710	11.1
150	14.6	340	11.9	530	11.2	720	11.0
161	14.6	349	11.9	539	11.2	730	11.0
170	14.5	360	11.8	550	11.2	741	11.0
180	14.1	370	11.6	562	11.1	750	11.0
190	14.0	380	11.6	570	11.2	759	11.0

XBT DROP 093 28 39.4N 112 56.6W 23 NOV 84 0700 MST



XBT DROP 093 T-7 RADAR: none GULF COORDS: -46.3 261.2
JDAY 328 1400Z DEPTH 1300m/710m SST 19.75 2M TEMPS: SAIL 20.30 XBT 20.17
GULF OF CALIFORNIA: END AXBT1 LINE, AXBT1-12 (BAD BELOW 710M)

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.8	200	12.9	390	11.9	581	11.3
21	19.4	209	12.8	401	11.9	590	11.3
30	18.5	220	12.7	409	11.8	599	11.2
40	17.9	230	12.6	420	11.7	610	11.2
50	17.6	240	12.5	428	11.7	619	11.2
60	16.4	249	12.5	440	11.7	631	11.2
71	16.1	260	12.5	451	11.6	641	11.1
80	15.9	270	12.4	461	11.6	650	11.1
90	15.2	280	12.5	472	11.6	659	11.1
100	15.1	290	12.3	480	11.5	669	11.1
110	14.9	300	12.2	491	11.4	681	11.1
120	14.9	310	12.1	501	11.4	691	11.1
130	14.8	320	12.1	511	11.3	701	11.1
140	14.6	330	12.0	520	11.3	710	11.1
150	14.0	340	12.0	531	11.3		
160	13.9	350	12.0	540	11.3		
170	13.6	360	12.0	550	11.3		
180	13.5	371	11.9	559	11.3		
190	13.2	379	11.9	569	11.3		

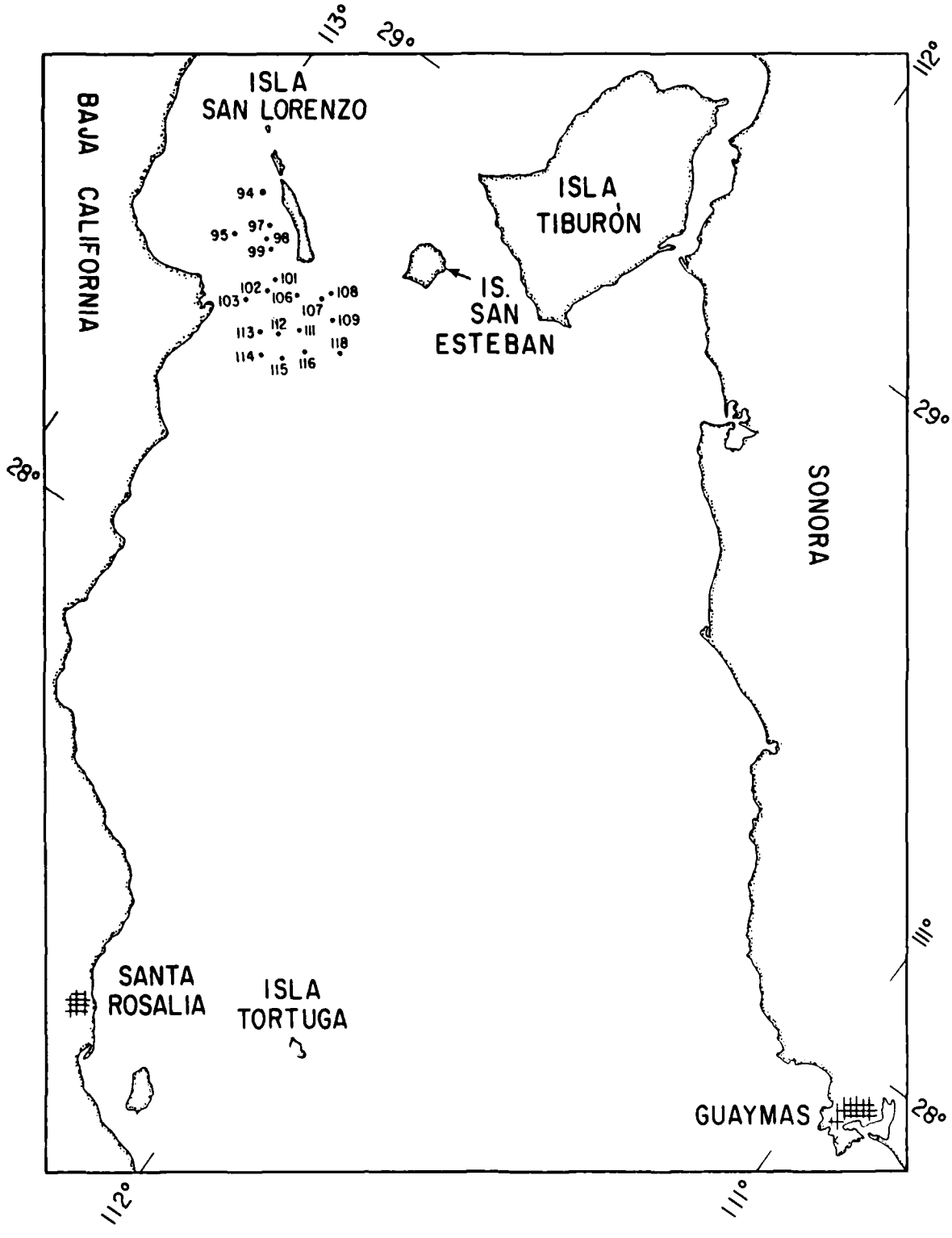
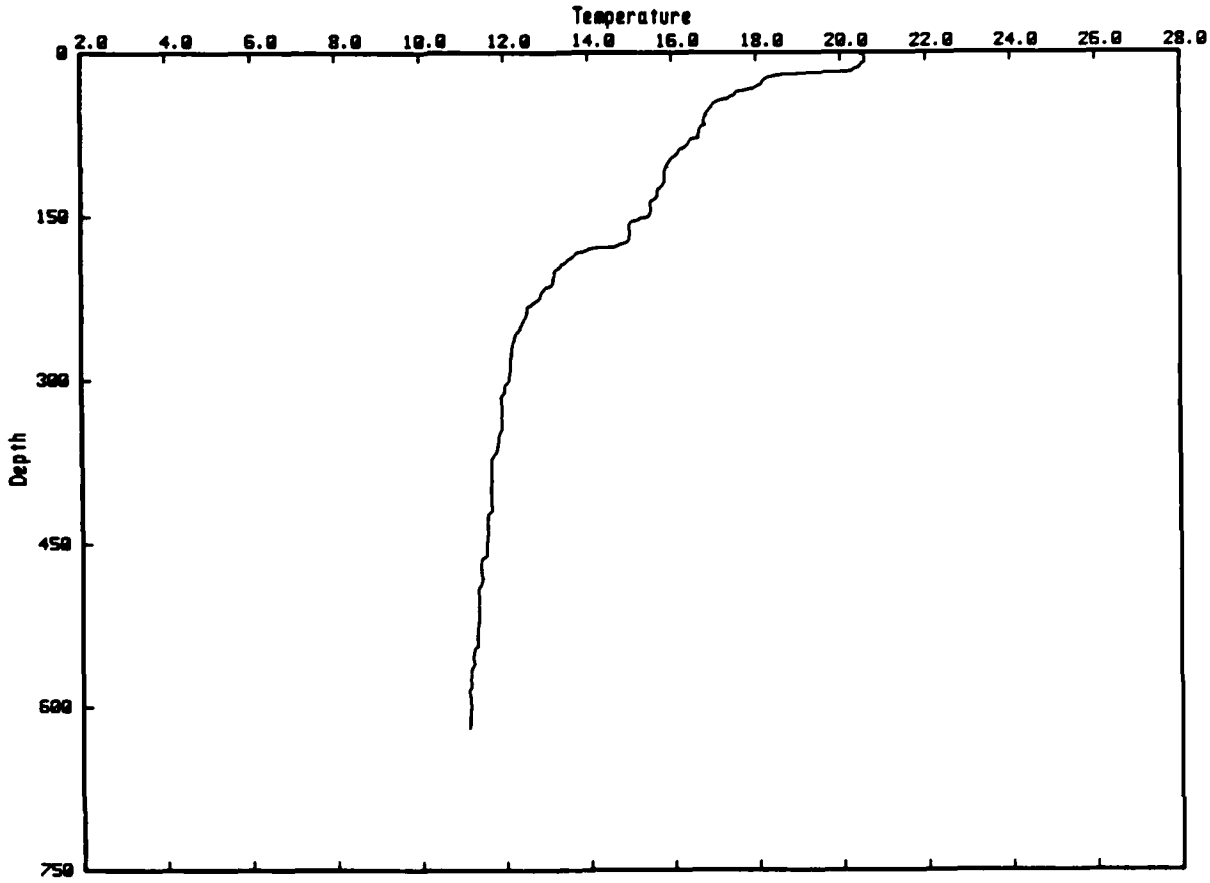


Figure 16. AXBT2 Section: XBT Station Locations

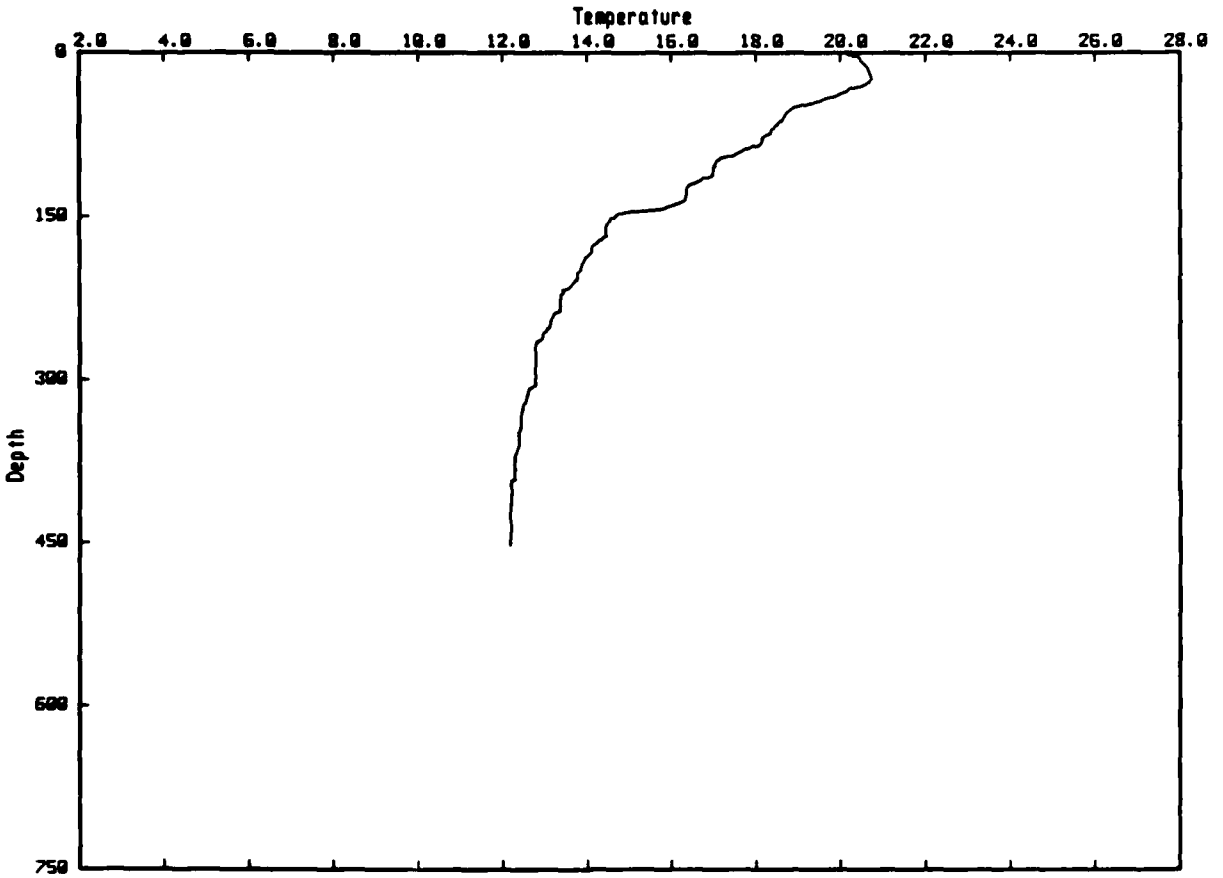
XBT DROP 094 28 38.5N 112 55.5W 23 NOV 84 0903 MST



XBT DROP 094 T-7 RADAR: none GULF COORDS: -45.8 258.8
JDAY 328 1603Z DEPTH 1265m/620m SST 19.70 2M TEMPS: SAIL 20.58 XBT 20.56
GULF OF CALIFORNIA: UPCAST PC6086 (BAD BELOW 620M)

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.5	201	13.2	391	11.7	580	11.2
20	19.0	209	13.2	401	11.7	589	11.2
30	18.1	220	12.9	411	11.7	602	11.2
40	17.4	230	12.7	420	11.7	609	11.2
50	16.9	239	12.5	431	11.6	620	11.1
60	16.8	250	12.4	441	11.6		
70	16.7	261	12.3	451	11.6		
80	16.4	271	12.2	460	11.6		
91	16.1	280	12.2	470	11.4		
100	16.0	290	12.1	481	11.5		
110	15.8	300	12.1	490	11.4		
120	15.8	310	12.0	499	11.4		
130	15.6	318	11.9	510	11.4		
139	15.5	331	12.0	520	11.4		
150	15.4	343	12.0	529	11.4		
160	15.0	349	11.9	540	11.4		
171	15.0	360	11.9	551	11.3		
180	14.0	371	11.7	560	11.3		
191	13.5	380	11.7	570	11.2		

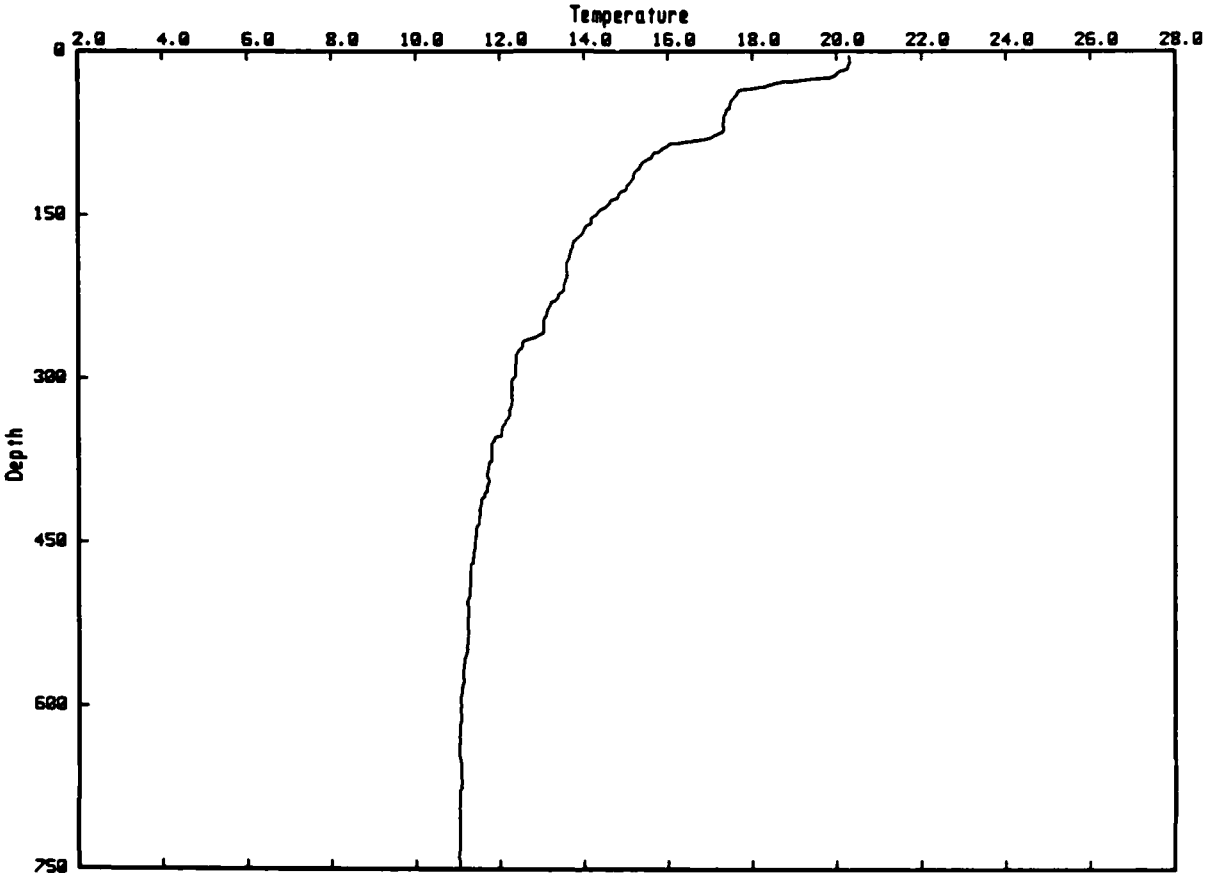
XBT DROP 095 28 33.0N 112 55.3W 23 NOV 84 1905 MST



XBT DROP 095 T-7 RADAR: none GULF COORDS: -51.6 250.4
JDAY 329 205Z DEPTH 453m/453m SST 19.95 2M TEMPS: SAIL 20.32 XBT 20.44
GULF OF CALIFORNIA: START AXBT2 LINE, AXBT2-1, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	20.6	200	13.8	390	12.3
20	20.7	210	13.7	400	12.2
30	20.5	220	13.4	410	12.2
39	19.9	230	13.4	420	12.2
50	18.9	240	13.2	430	12.2
60	18.6	249	13.1	441	12.2
70	18.4	261	12.9	450	12.2
80	18.2	269	12.8		
90	17.7	280	12.8		
100	17.1	289	12.8		
110	17.0	300	12.8		
120	16.5	310	12.6		
130	16.4	320	12.6		
140	15.9	330	12.4		
150	14.7	340	12.4		
160	14.4	350	12.4		
170	14.4	360	12.4		
181	14.1	370	12.3		
190	13.9	379	12.3		

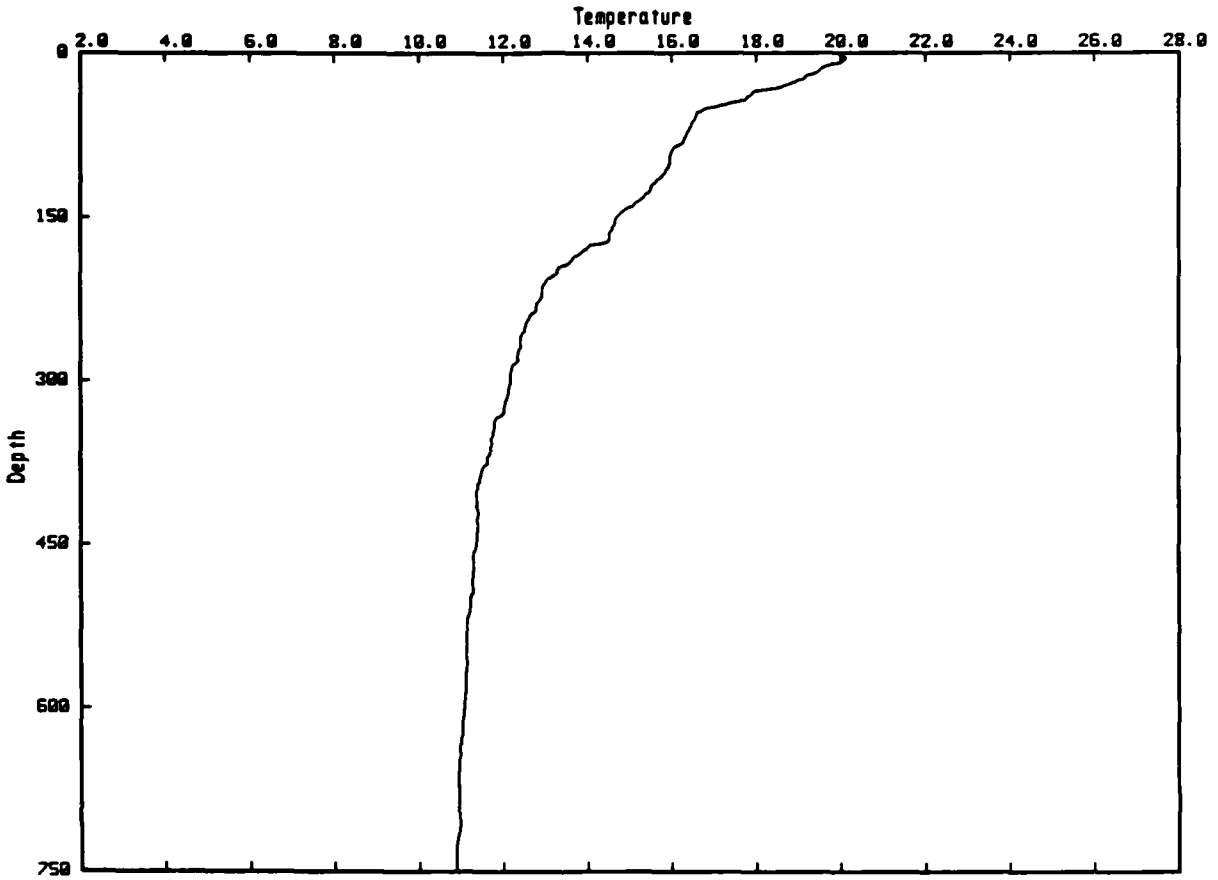
XBT DROP 097 28 35.9N 112 52.5W 23 NOV 84 1930 MST



XBT DROP 097 T-7 RADAR: none GULF COORDS: -44.7 252.0
JDAY 329 230Z DEPTH 1223m/760m SST 20.05 2M TEMPS: SAIL 20.45 XBT .00
GULF OF CALIFORNIA: AXBT2-2, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.3	201	13.6	390	11.7	581	11.1
20	20.0	210	13.6	400	11.7	590	11.1
30	18.5	220	13.5	410	11.6	600	11.1
40	17.6	230	13.2	420	11.5	611	11.1
50	17.5	240	13.1	429	11.5	621	11.1
60	17.3	250	13.0	439	11.4	630	11.0
70	17.3	260	12.9	450	11.4	641	11.0
80	16.9	270	12.5	460	11.4	650	11.1
89	15.9	280	12.4	470	11.3	660	11.1
100	15.5	290	12.4	480	11.3	671	11.1
110	15.2	300	12.3	490	11.3	681	11.0
120	15.1	311	12.3	500	11.3	690	11.1
131	14.8	319	12.3	509	11.2	699	11.1
140	14.6	330	12.2	521	11.2	710	11.0
150	14.3	340	12.1	531	11.2	721	11.1
160	14.1	350	12.0	540	11.2	730	11.0
170	13.9	360	11.8	550	11.2	740	11.0
180	13.7	370	11.8	560	11.1	750	11.1
190	13.6	380	11.7	570	11.1	759	11.1

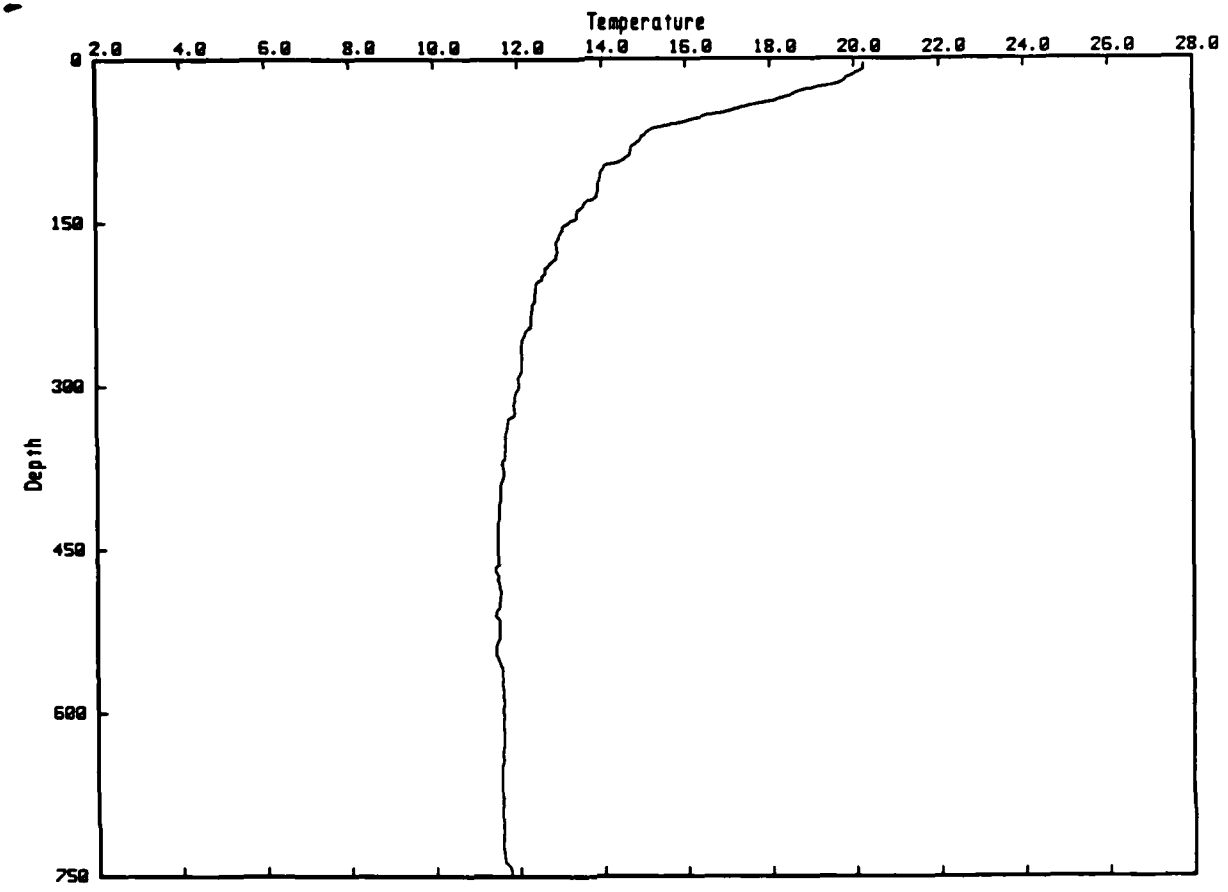
XBT DROP 098 28 34.6N 112 51.7W 23 NOV 84 1942 MST



XBT DROP 098 T-7 RADAR: none GULF COORDS: -45.1 249.3
JDAY 329 242Z DEPTH 965m/760m SST 19.75 2M TEMPS: SAIL 20.15 XBT 20.09
GULF OF CALIFORNIA: AXBT2-3, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.8	200	13.3	390	11.4	580	11.1
20	19.3	210	13.0	401	11.4	590	11.1
30	18.7	219	12.9	411	11.4	600	11.1
40	17.8	230	12.8	419	11.4	610	11.0
50	16.9	240	12.6	430	11.4	620	11.0
60	16.5	249	12.5	440	11.4	631	11.0
70	16.4	260	12.4	450	11.4	641	11.0
80	16.3	270	12.4	460	11.3	649	10.9
90	16.0	280	12.4	471	11.3	659	10.9
101	15.9	290	12.2	480	11.3	668	10.9
110	15.8	300	12.2	490	11.3	679	11.0
120	15.6	310	12.1	501	11.2	691	10.9
130	15.4	320	12.1	510	11.2	700	11.0
140	15.1	330	12.0	522	11.1	710	11.0
150	14.7	341	11.8	529	11.1	720	10.9
160	14.6	350	11.7	541	11.1	729	10.9
170	14.5	361	11.7	549	11.1	740	10.9
180	13.9	370	11.6	560	11.1	751	10.9
190	13.6	380	11.5	570	11.1	760	10.9

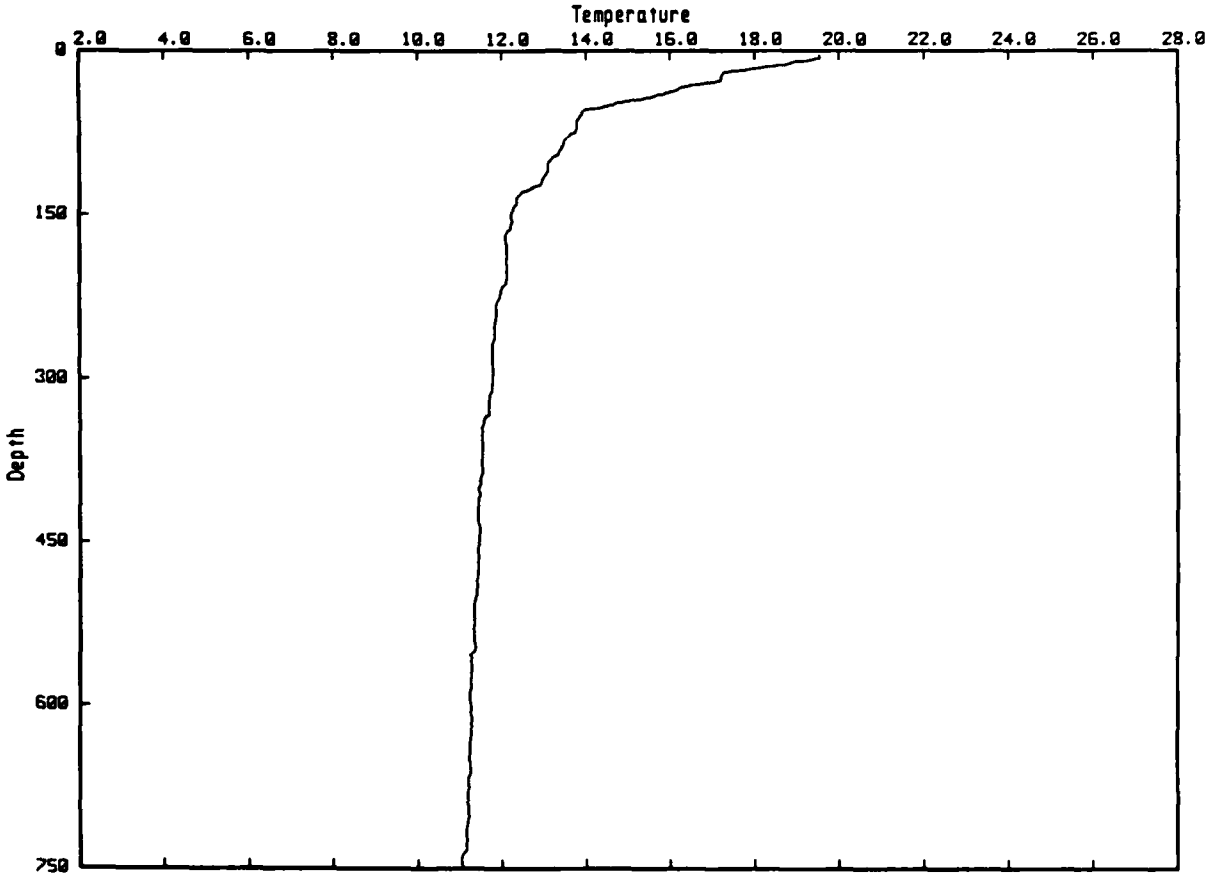
XBT DROP 099 28 33.9N 112 50.5W 23 NOV 84 1954 MST



XBT DROP 099 T-7 RADAR: none GULF COORDS: -44.3 247.1
JDAY 329 254Z DEPTH 914m/760m SST 19.40 2M TEMPS: SAIL 20.32 XBT .00
GULF OF CALIFORNIA: AXBT2-4, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	20.2	200	12.6	391	11.6	581	11.6
20	19.8	210	12.4	401	11.6	590	11.6
30	18.7	220	12.4	411	11.5	599	11.6
40	17.9	229	12.3	419	11.5	609	11.6
50	16.8	240	12.3	431	11.5	618	11.6
60	15.7	249	12.2	438	11.5	629	11.6
70	15.0	260	12.1	451	11.5	641	11.6
80	14.7	270	12.1	461	11.5	651	11.6
90	14.6	280	12.1	470	11.4	658	11.6
100	14.0	289	12.0	480	11.5	669	11.6
110	13.9	300	12.0	491	11.6	680	11.6
120	13.9	311	11.9	500	11.5	690	11.6
130	13.7	321	11.9	511	11.4	701	11.6
140	13.4	330	11.8	521	11.5	710	11.6
150	13.2	341	11.7	530	11.5	720	11.6
160	13.0	350	11.7	540	11.5	729	11.6
170	12.9	360	11.7	550	11.5	740	11.7
180	12.9	371	11.6	560	11.6	751	11.8
190	12.7	379	11.6	571	11.6	760	11.8

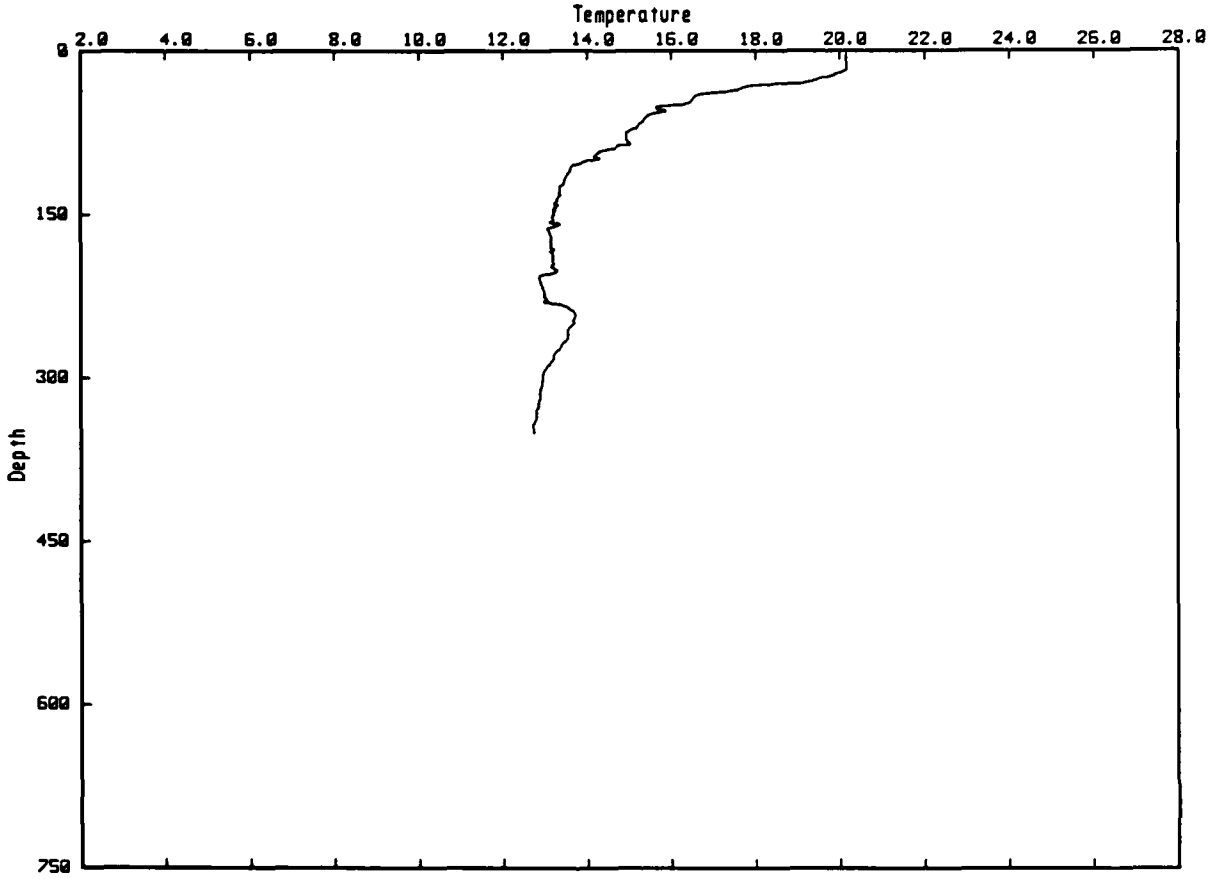
XBT DROP 101 28 31.5N 112 48.0W 23 NOV 84 2010 MST



XBT DROP 101 T-7 RADAR: none GULF COORDS: -43.6 241.1
JDAY 329 310Z DEPTH 969m/760m SST 19.85 2M TEMPS: SAIL 19.68 XBT 19.54
GULF OF CALIFORNIA: AXBT2-5, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	19.0	199	12.1	391	11.5	579	11.3
20	17.3	209	12.1	400	11.4	591	11.2
30	16.9	220	12.0	409	11.4	599	11.3
40	15.8	229	11.9	421	11.4	610	11.3
50	14.6	241	11.9	430	11.4	619	11.3
60	13.9	250	11.8	440	11.5	630	11.3
69	13.8	260	11.8	451	11.4	638	11.2
80	13.5	270	11.8	459	11.4	650	11.2
90	13.4	280	11.8	470	11.4	660	11.3
100	13.2	290	11.8	480	11.4	668	11.2
110	13.1	301	11.8	491	11.4	681	11.2
120	12.9	310	11.8	499	11.4	690	11.2
130	12.4	319	11.7	510	11.4	699	11.2
140	12.3	329	11.7	519	11.4	710	11.2
150	12.2	340	11.6	529	11.3	720	11.1
160	12.2	349	11.5	540	11.3	731	11.2
171	12.1	360	11.6	551	11.3	739	11.1
181	12.1	369	11.5	561	11.3	748	11.1
189	12.1	380	11.5	570	11.3	760	11.1

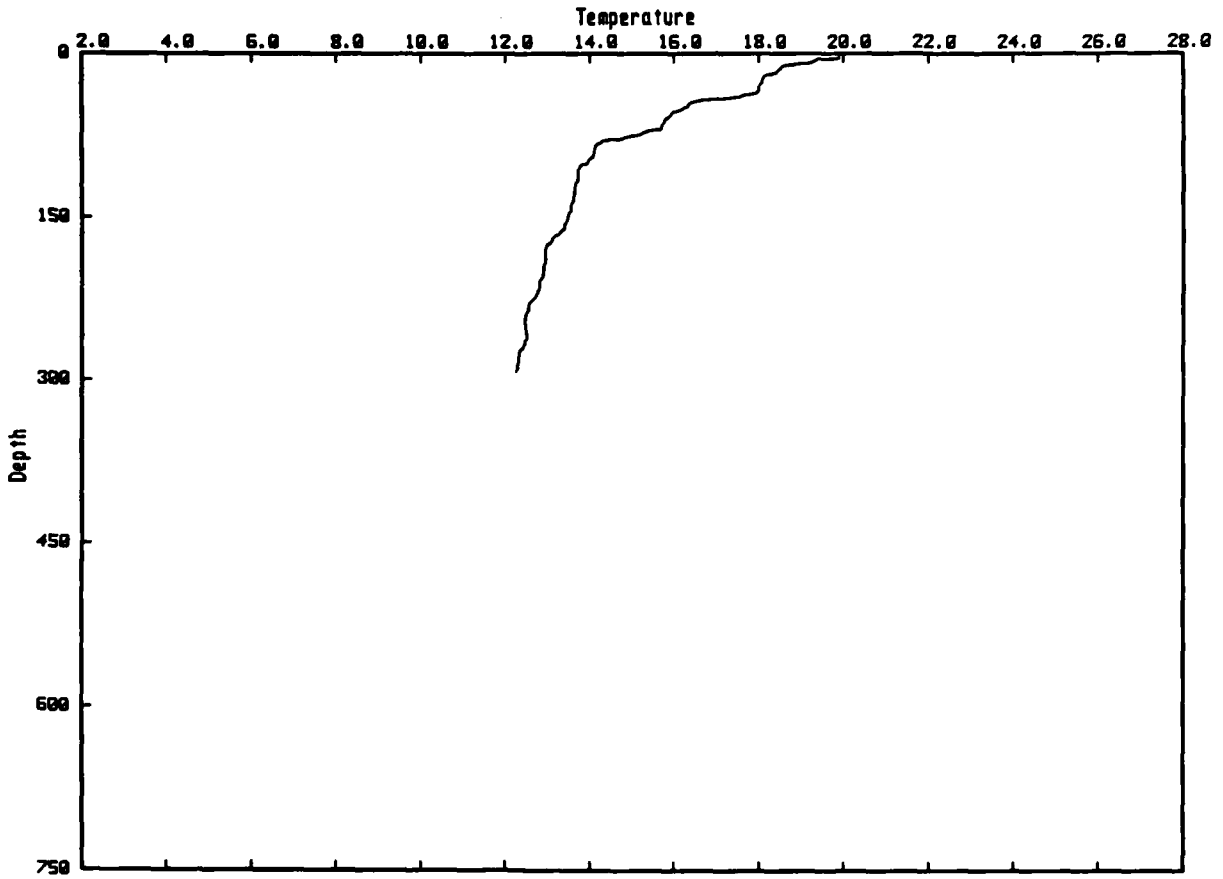
XBT DROP 102 28 30.0N 112 48.0W 23 NOV 84 2022 MST



XBT DROP 102 T-7 RADAR: none GULF COORDS: -45.2 238.9
JDAY 329 322Z DEPTH 351m/760m SST 19.30 2M TEMPS: SAIL 20.18 XBT 20.16
GULF OF CALIFORNIA: AXBT2-6, SPRING TIDE

Z	TEMP	Z	TEMP
10	20.2	200	13.2
20	20.0	209	12.9
30	19.1	220	13.0
40	16.7	230	13.0
50	16.0	240	13.7
60	15.4	250	13.7
70	15.2	260	13.6
80	14.9	271	13.4
90	14.5	280	13.2
100	14.1	290	13.1
110	13.6	301	13.0
120	13.5	310	12.9
130	13.3	320	12.9
140	13.2	330	12.8
150	13.2	340	12.8
160	13.3	350	12.7
170	13.2		
180	13.1		
190	13.2		

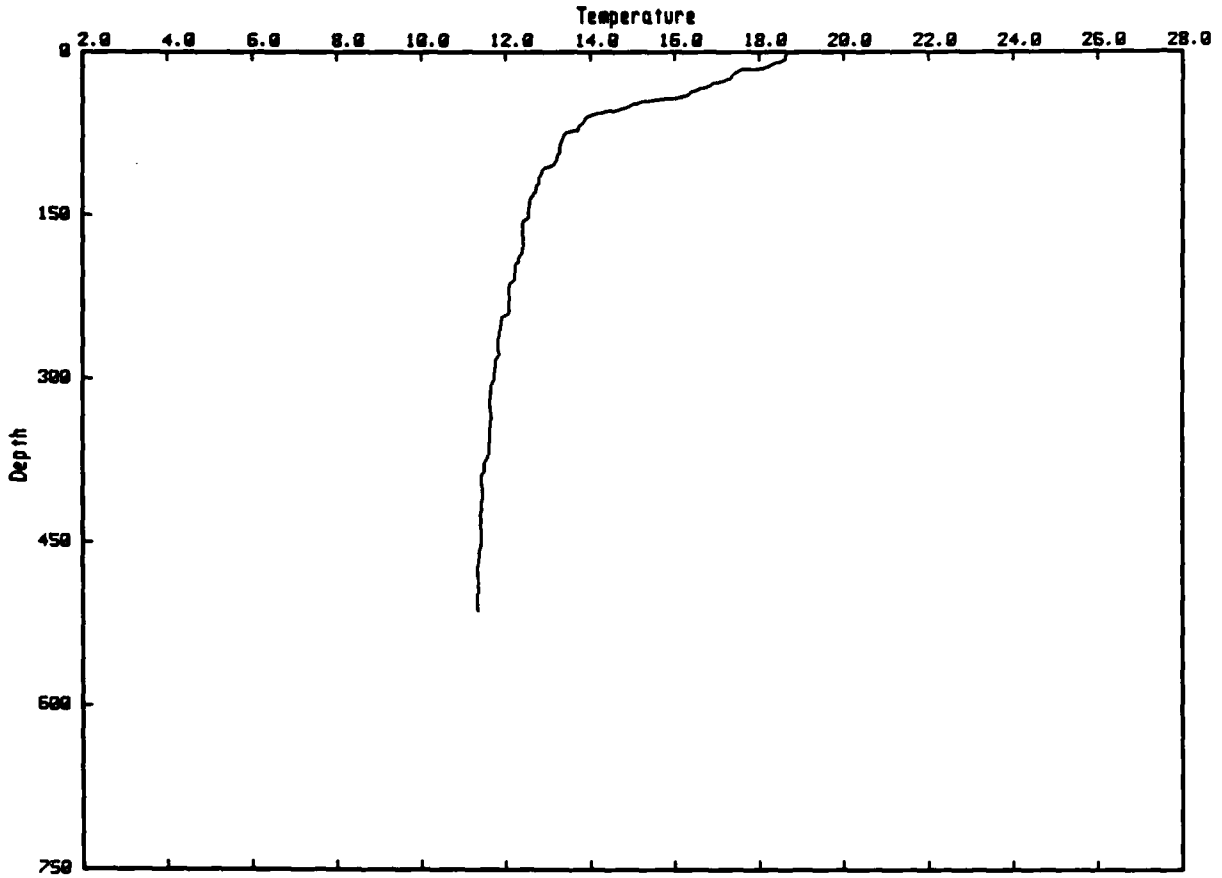
XBT DROP 103 28 28.0N 112 49.5W 23 NOV 84 2034 MST



XBT DROP 103 T-7 RADAR: none GULF COORDS: -49.4 237.4
JDAY 329 334Z DEPTH 294m/294m SST 19.68 2M TEMPS: SAIL 20.08 XBT 19.91
GULF OF CALIFORNIA: AXBT2-6, SPRING TIDE

Z	TEMP	Z	TEMP
10	18.8	200	12.9
20	18.2	211	12.8
30	18.0	221	12.7
40	17.4	230	12.6
50	16.2	240	12.5
60	15.8	250	12.5
70	15.5	261	12.5
80	14.3	270	12.4
90	14.1	280	12.3
100	13.9	290	12.3
111	13.7		
121	13.6		
131	13.6		
140	13.6		
150	13.5		
160	13.4		
170	13.1		
180	12.9		
190	12.9		

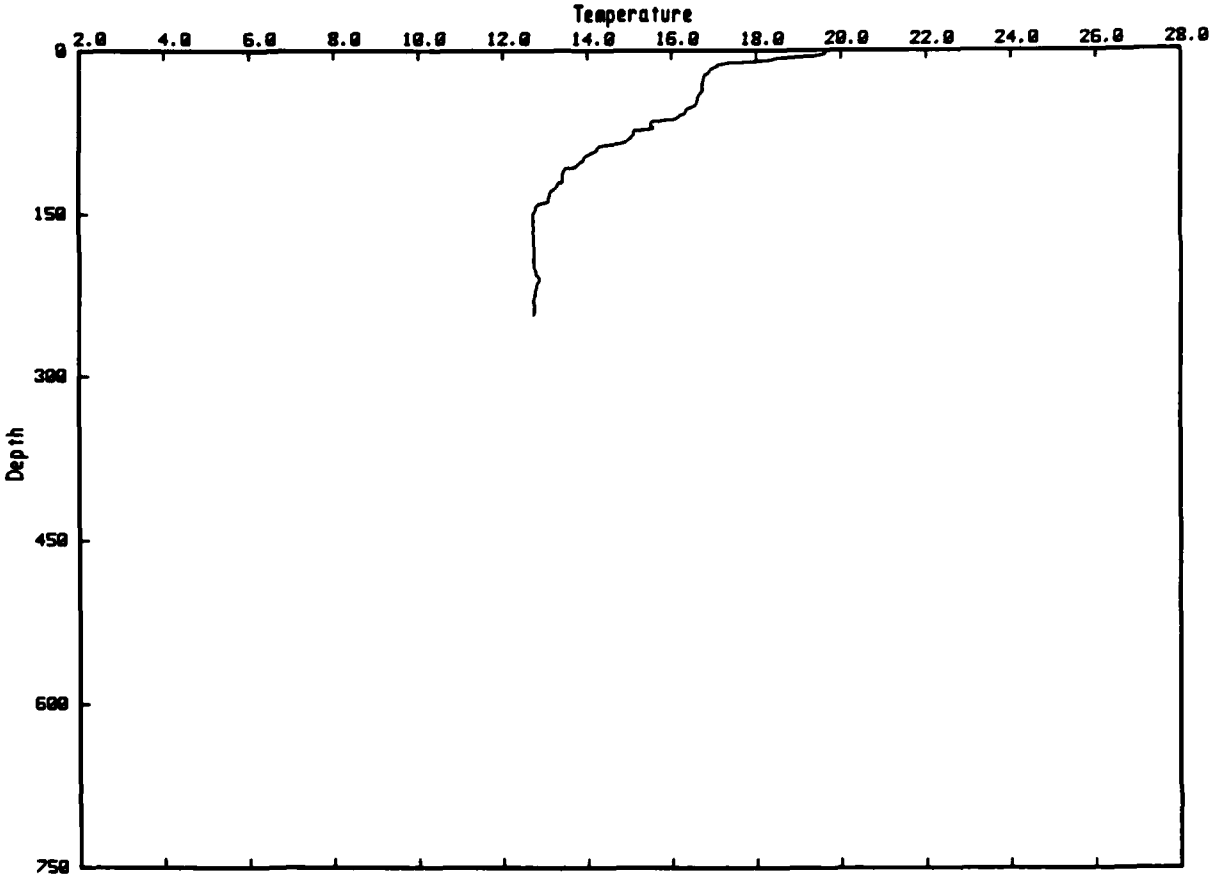
XBT DROP 106 28 31.5N 112 44.8W 23 NOV 84 2107 MST



XBT DROP 106 T-7 RADAR: none GULF COORDS: -39.3 238.0
JDAY 329 407Z DEPTH 980m/512m SST 18.45 2M TEMPS: SAIL 19.08 XBT 18.63
GULF OF CALIFORNIA: AXBT2-7, SPRING TIDE (BAD AFTER 510 M)

Z	TEMP	Z	TEMP	Z	TEMP
10	18.4	201	12.2	390	11.4
20	17.4	210	12.2	400	11.4
30	16.9	220	12.1	411	11.4
40	16.3	230	12.1	420	11.4
50	14.9	240	12.1	430	11.4
60	13.9	250	11.9	439	11.4
70	13.7	259	11.9	450	11.4
80	13.4	270	11.8	461	11.4
90	13.3	280	11.8	470	11.4
100	13.2	290	11.7	481	11.4
110	12.9	300	11.7	489	11.4
120	12.8	310	11.7	500	11.4
130	12.7	320	11.6	510	11.3
141	12.6	329	11.6		
150	12.6	340	11.7		
160	12.4	350	11.6		
169	12.4	359	11.6		
179	12.4	370	11.6		
190	12.3	380	11.5		

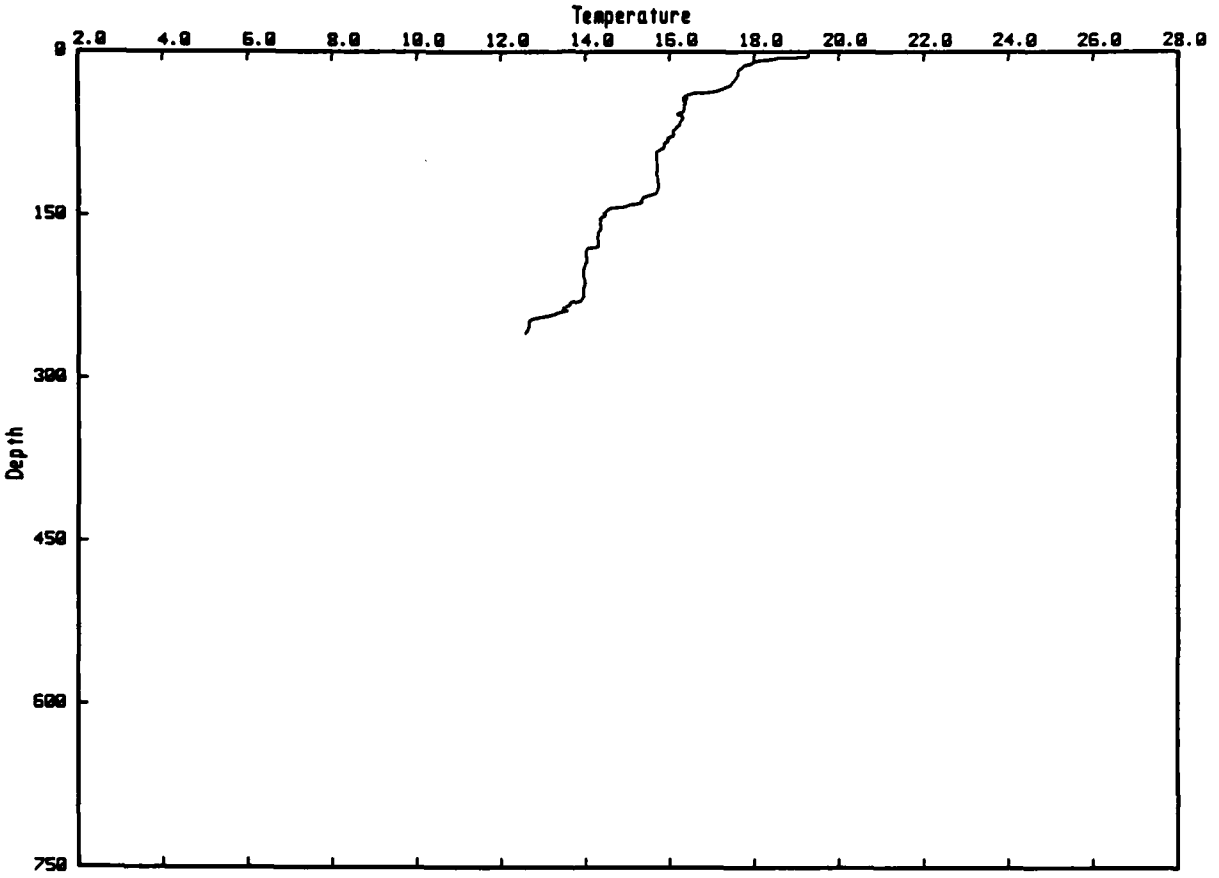
XBT DROP 107 28 32.7N 112 42.1W 23 NOV 84 2119 MST



XBT DROP 107 T-7 RADAR: none GULF COORDS: -34.4 237.2
JDAY 329 419Z DEPTH 244m/244m SST 19.42 2M TEMPS: SAIL 19.14 XBT 19.56
GULF OF CALIFORNIA: AXBT2-8, SPRING TIDE

Z	TEMP	Z	TEMP
10	18.1	200	12.8
20	16.9	210	12.9
31	16.7	220	12.8
40	16.7	231	12.7
50	16.6	241	12.7
60	16.2		
70	15.6		
80	15.0		
90	14.2		
100	13.9		
110	13.4		
120	13.4		
130	13.1		
140	13.0		
150	12.7		
161	12.7		
171	12.7		
180	12.7		
189	12.7		

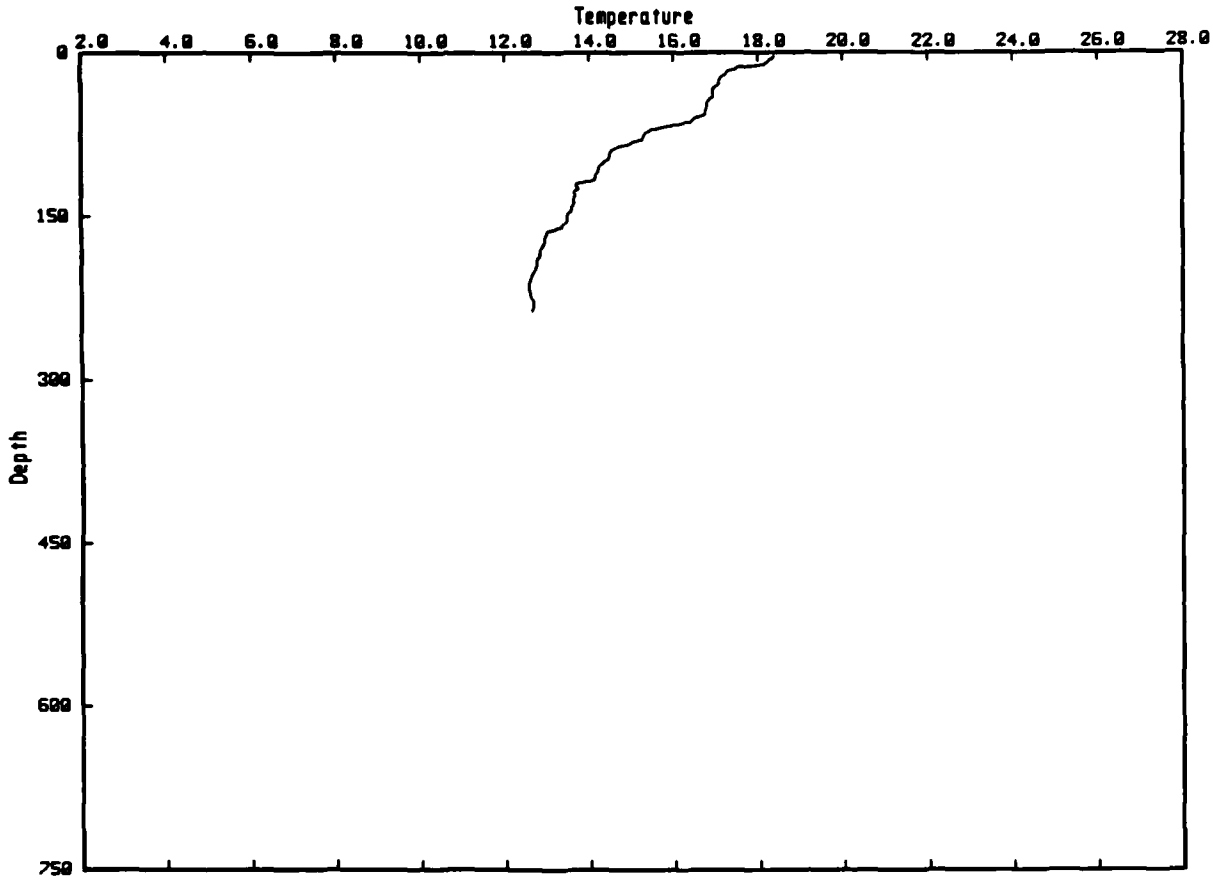
XBT DROP 108 28 33.8N 112 41.6W 23 NOV 84 2131 MST



XBT DROP 108 T-7 RADAR: none GULF COORDS: -32.6 238.4
JDAY 329 431Z DEPTH 259m/259m SST 18.85 2M TEMPS: SAIL 19.09 XBT 19.29
GULF OF CALIFORNIA: AXBT2-9, SPRING TIDE

Z	TEMP	Z	TEMP
10	18.0	200	13.9
21	17.6	209	14.0
30	17.4	219	13.9
40	16.4	230	13.6
50	16.4	240	13.3
60	16.3	250	12.6
70	16.1	259	12.6
80	15.9		
90	15.7		
100	15.7		
110	15.7		
120	15.7		
130	15.6		
140	15.1		
150	14.5		
160	14.4		
170	14.3		
180	14.0		
190	14.0		

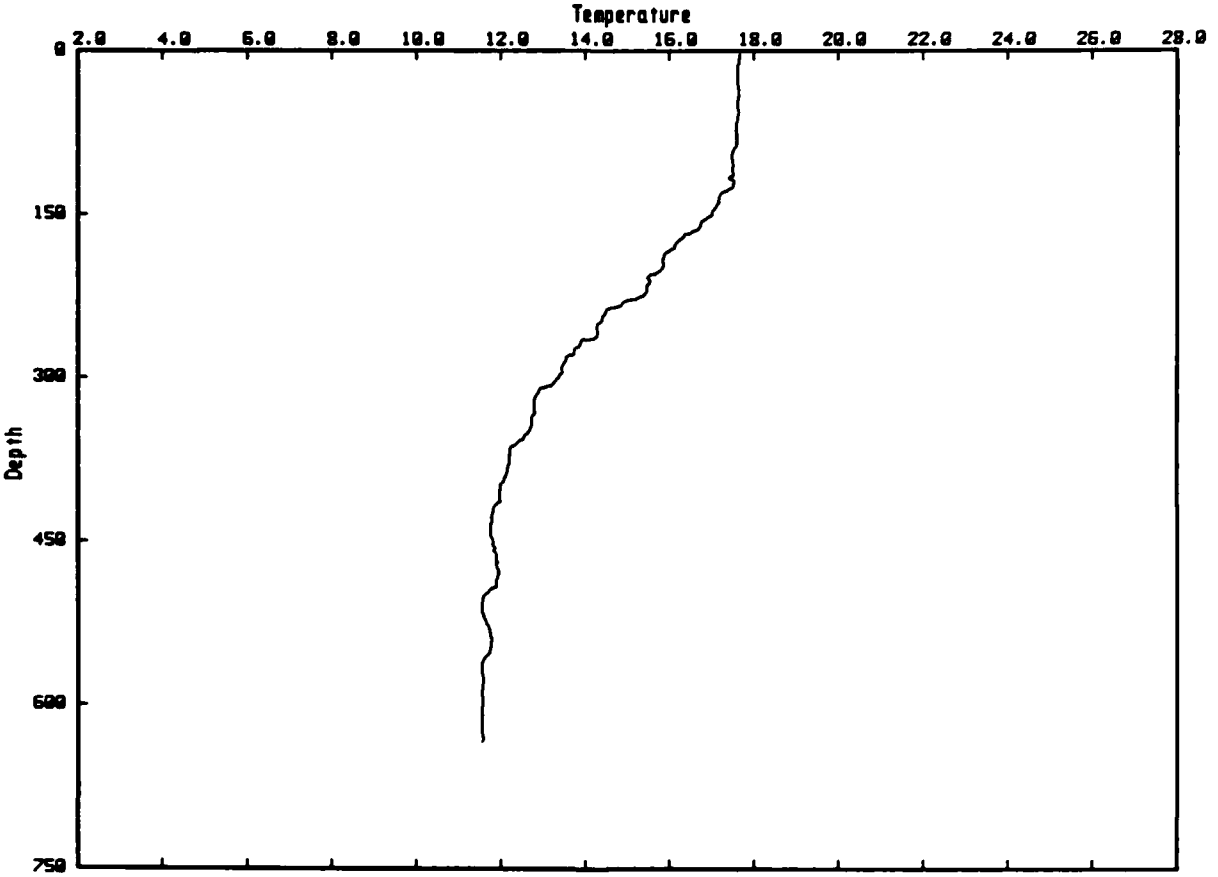
XBT DROP 109 28 31.6N 112 39.5W 23 NOV 84 2150 MST



XBT DROP 109 T-7 RADAR: none GULF COORDS: -32.2 233.1
JDAY 329 450Z DEPTH 247m/238m SST 18.17 2M TEMPS: SAIL 18.19 XBT 18.38
GULF OF CALIFORNIA: AXBT2-10, SPRING TIDE

Z	TEMP	Z	TEMP
10	18.2	200	12.7
20	17.3	210	12.6
30	17.1	220	12.6
41	16.9	231	12.7
49	16.8	238	12.6
60	16.6		
70	15.6		
80	15.3		
91	14.5		
100	14.4		
110	14.2		
120	13.7		
130	13.7		
140	13.6		
150	13.5		
160	13.3		
171	12.9		
180	12.8		
190	12.8		

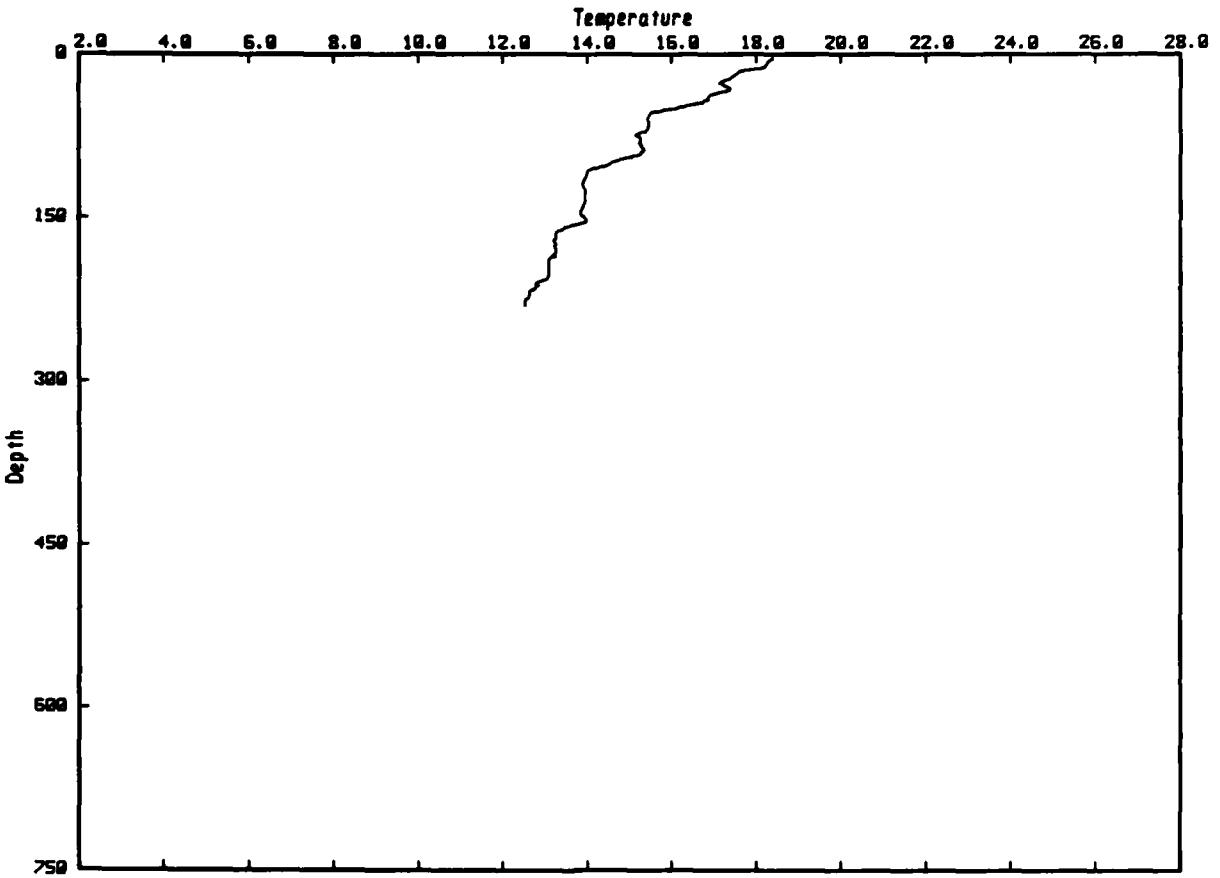
XBT DROP 111 28 28.6N 112 42.1W 23 NOV 84 2214 MST



XBT DROP 111 T-7 RADAR: none GULF COORDS: -38.9 231.1
JDAY 329 514Z DEPTH 634m/634m SST 17.35 2M TEMPS: SAIL 18.25 XBT 17.67
GULF OF CALIFORNIA: AXBT2-11, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	17.7	200	15.8	390	12.1	580	11.6
20	17.6	210	15.5	399	12.0	589	11.6
30	17.6	220	15.5	410	12.0	601	11.6
40	17.6	230	14.9	419	11.8	609	11.6
50	17.6	240	14.5	430	11.8	620	11.6
61	17.6	250	14.3	440	11.8	630	11.6
69	17.6	260	14.3	450	11.8		
80	17.6	270	13.9	460	11.9		
90	17.5	280	13.6	470	11.9		
101	17.5	290	13.4	480	12.0		
110	17.5	300	13.4	490	11.9		
120	17.6	310	13.0	500	11.6		
130	17.2	320	12.8	511	11.6		
140	17.2	330	12.8	520	11.6		
150	17.0	340	12.7	530	11.7		
160	16.7	350	12.7	540	11.8		
171	16.3	360	12.4	550	11.7		
180	16.1	370	12.2	559	11.6		
191	15.9	380	12.2	570	11.6		

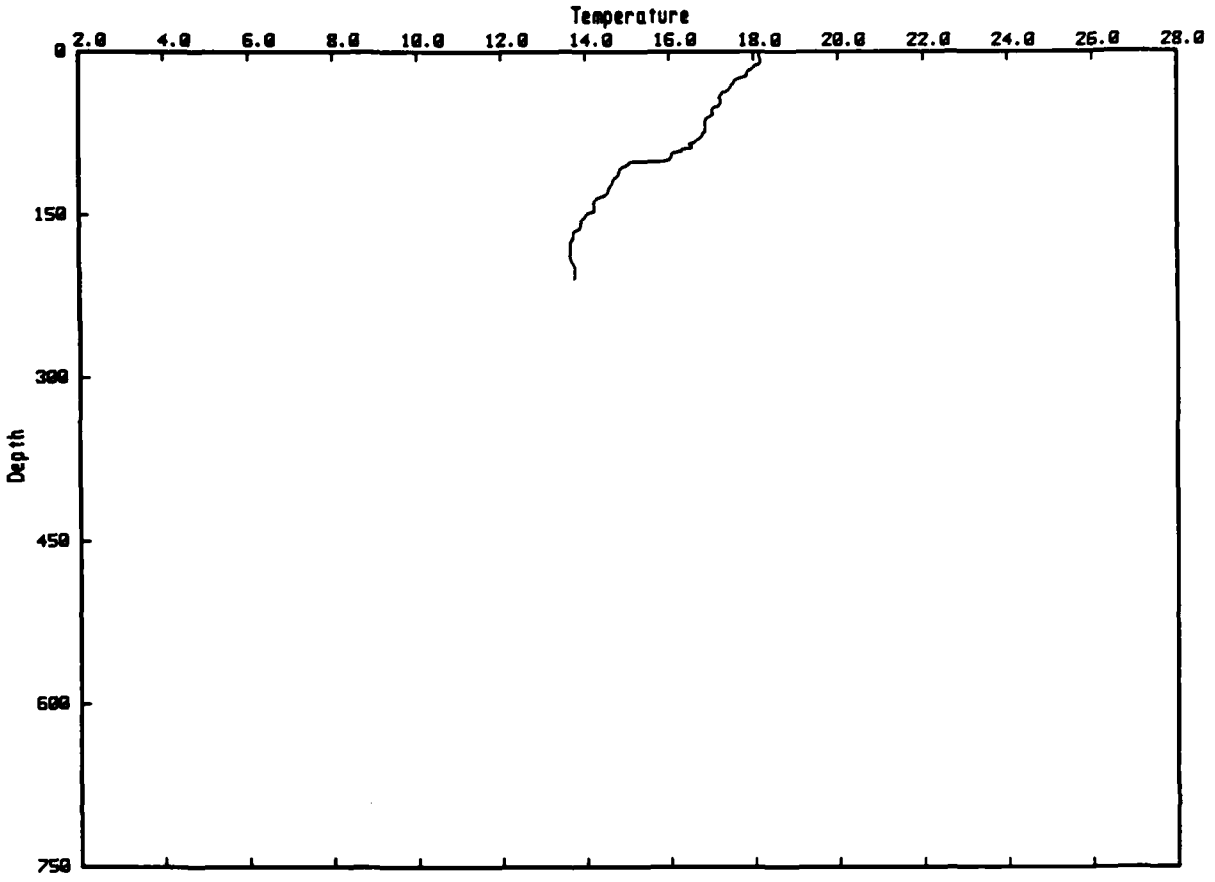
XBT DROP 112 28 27.0N 112 43.8W 23 NOV 84 2226 MST



XBT DROP 112 T-7 RADAR: none GULF COORDS: -43.0 230.4
JDAY 329 526Z DEPTH 231m/231m SST 18.60 2M TEMPS: SAIL 18.42 XBT 18.39
GULF OF CALIFORNIA: AXBT2-12, SPRING TIDE

Z	TEMP	Z	TEMP
10	18.2	200	13.1
20	17.5	210	12.8
30	17.3	220	12.6
40	16.9	230	12.5
50	16.1		
60	15.4		
70	15.4		
81	15.2		
90	15.3		
100	14.6		
110	14.0		
121	13.9		
130	13.9		
140	13.9		
150	13.9		
161	13.4		
170	13.2		
180	13.3		
190	13.1		

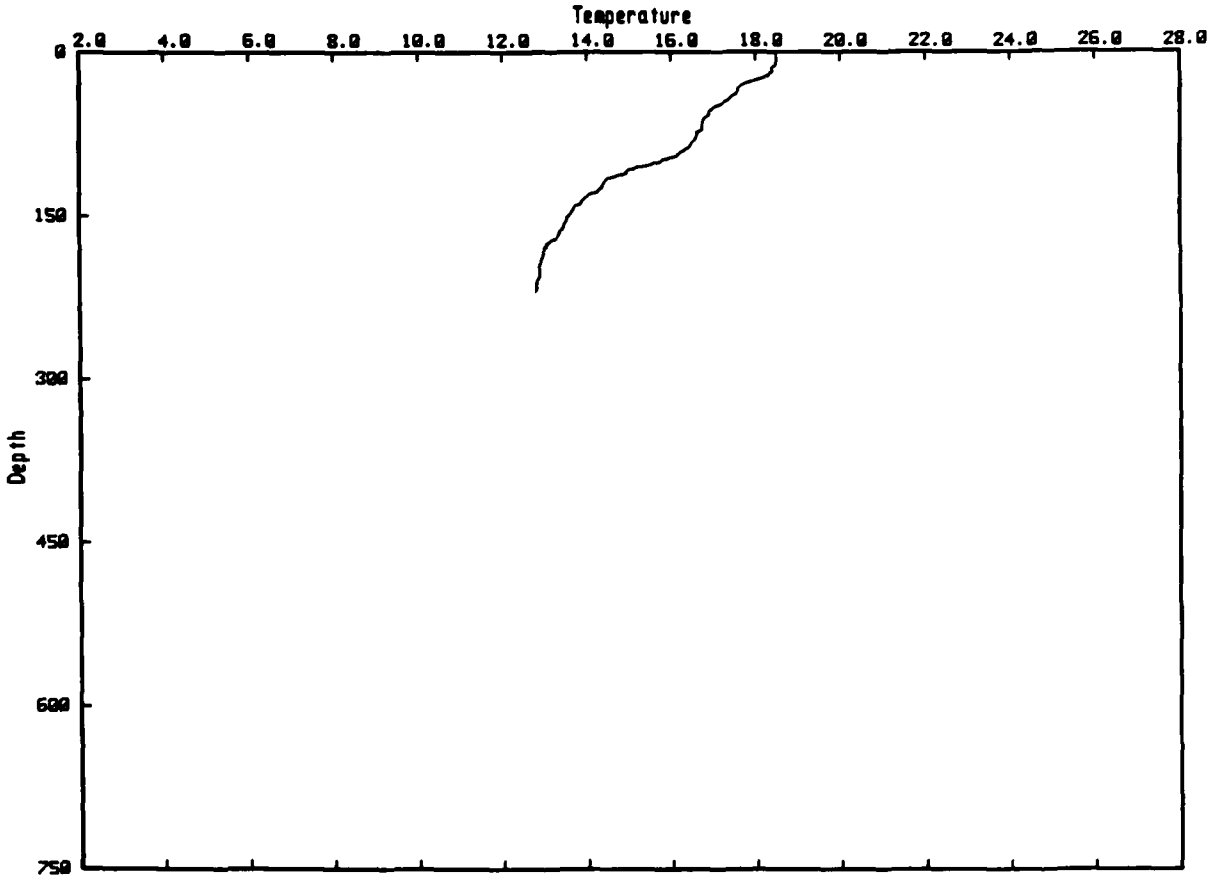
XBT DROP 113 28 26.0N 112 45.8W 23 NOV 84 2238 MST



XBT DROP 113 T-7 RADAR: none GULF COORDS: -46.7 230.8
JDAY 329 538Z DEPTH 250m/209m SST 18.08 2M TEMPS: SAIL 18.20 XBT 18.14
GULF OF CALIFORNIA: AXBT2-13, SPRING TIDE

Z	TEMP	Z	TEMP
10	18.2	200	13.7
20	17.9	209	13.7
30	17.5		
40	17.2		
50	17.2		
60	17.0		
70	16.9		
80	16.7		
90	16.3		
100	16.0		
110	14.8		
120	14.6		
130	14.5		
140	14.2		
150	14.0		
160	13.9		
170	13.7		
180	13.6		
190	13.6		

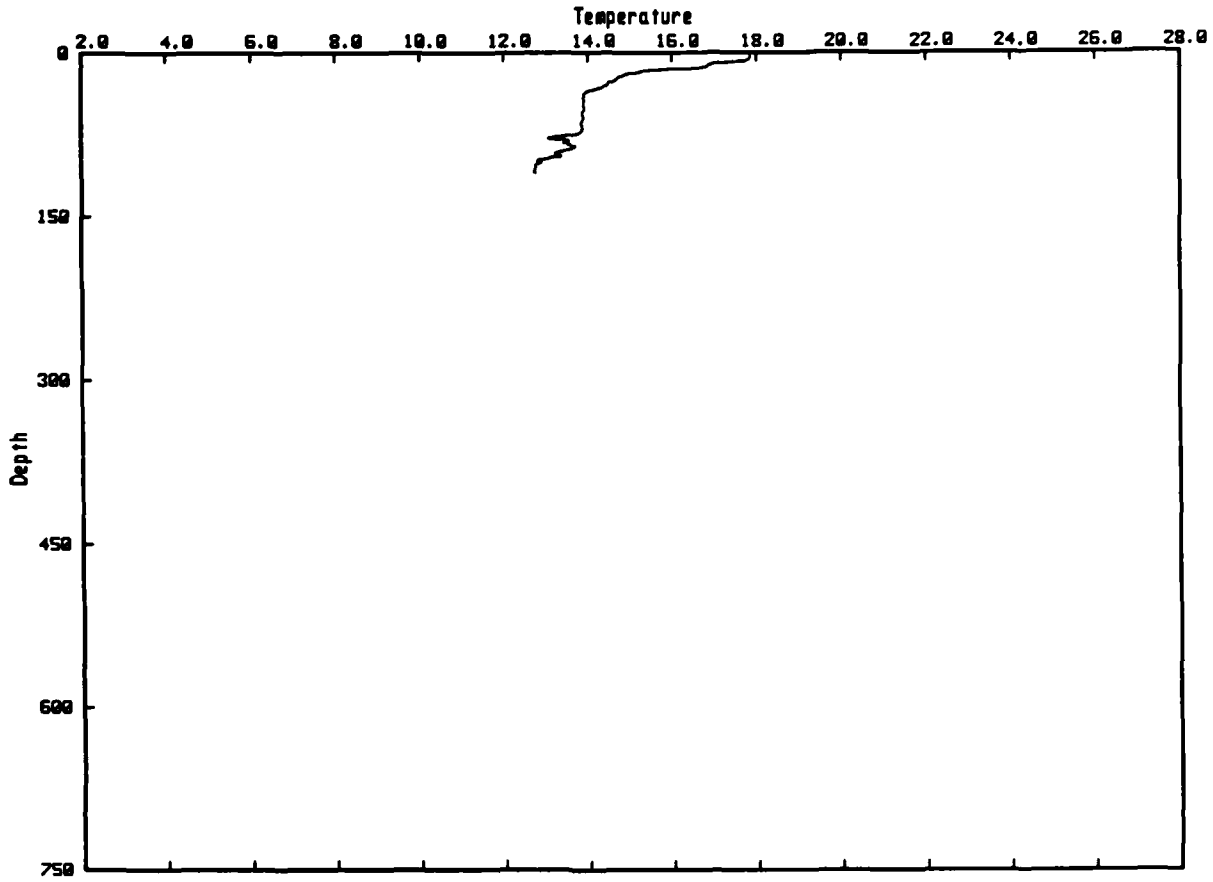
XBT DROP 114 28 24.0N 112 44.0W 23 NOV 84 2306 MST



XBT DROP 114 T-7 RADAR: none GULF COORDS: -46.5 226.1
JDAY 329 606Z DEPTH 224m/219m SST 18.23 2M TEMPS: SAIL 18.40 XBT 18.49
GULF OF CALIFORNIA: AXBT2-14, SPRING TIDE

Z	TEMP	Z	TEMP
10	18.5	200	12.9
20	18.3	210	12.8
30	17.7	219	12.8
40	17.5		
50	17.1		
60	16.8		
71	16.7		
80	16.6		
90	16.3		
100	15.8		
109	14.9		
119	14.4		
130	14.1		
140	13.8		
150	13.6		
160	13.4		
170	13.3		
180	13.0		
190	12.9		

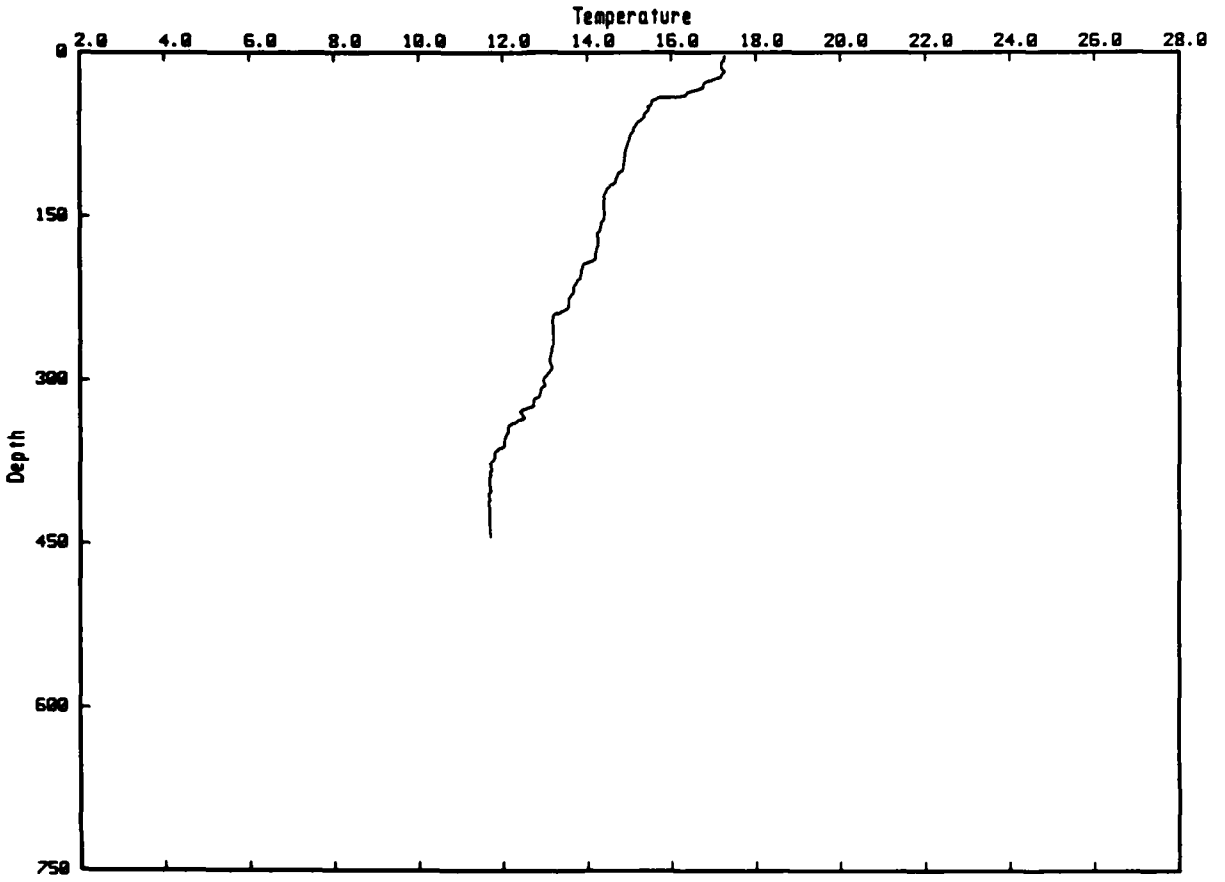
XBT DROP 115 28 25.1N 112 41.9W 23 NOV 84 2318 MST



XBT DROP 115 T-7 RADAR: none GULF COORDS: -42.5 225.7
JDAY 329 618Z DEPTH 111m/111m SST 17.67 2M TEMPS: SAIL 18.10 XBT 17.86
GULF OF CALIFORNIA: AXBT2-15, SPRING TIDE

Z	TEMP
10	17.0
20	14.9
30	14.5
40	13.9
50	13.9
59	13.9
70	13.9
80	13.5
90	13.4
100	12.9
110	12.7

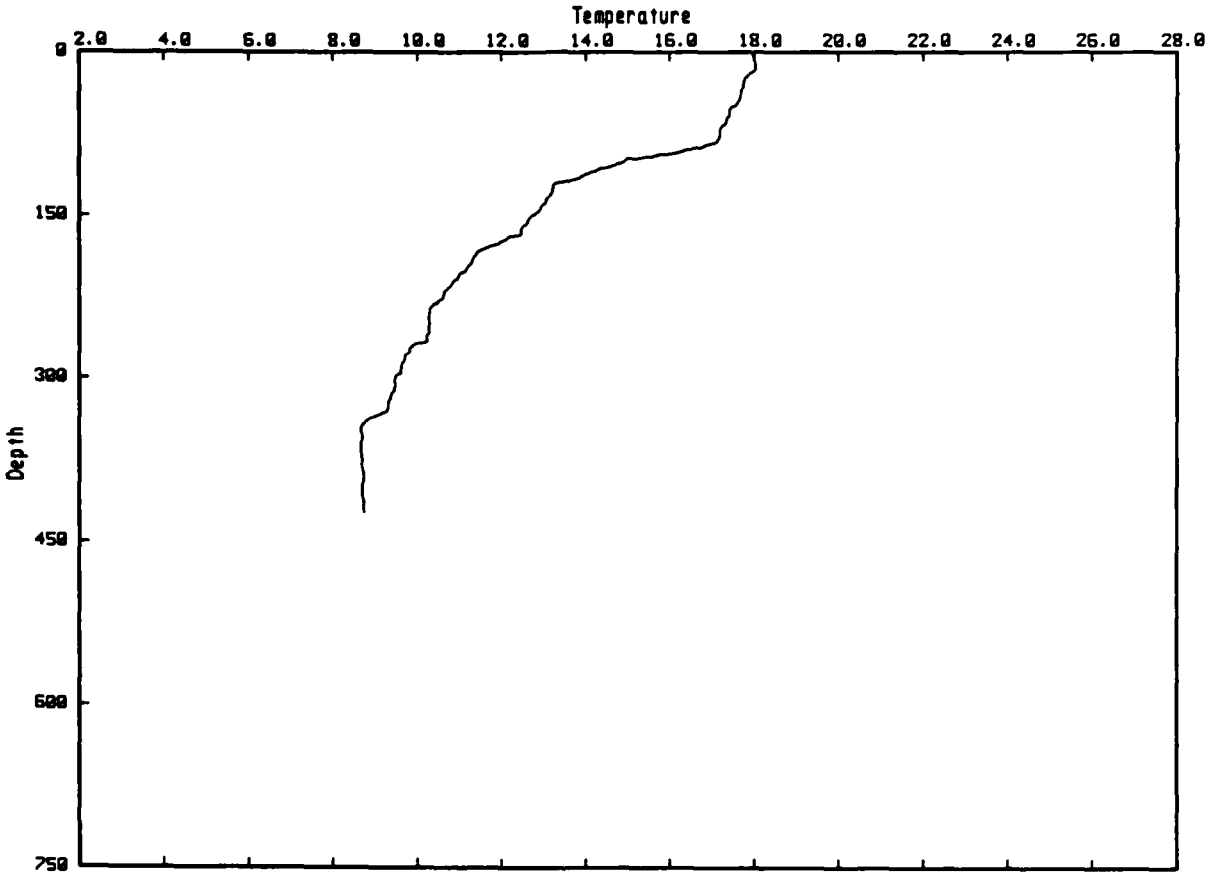
XBT DROP 116 28 27.0N 112 40.0W 23 NOV 84 2330 MST



XBT DROP 116 T-7 RADAR: none GULF COORDS: -37.9 226.7
JDAY 329 630Z DEPTH 454m/444m SST 17.35 2M TEMPS: SAIL 17.37 XBT 17.27
GULF OF CALIFORNIA: AXBT2-16, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	17.2	199	13.9	389	11.7
20	17.2	210	13.8	399	11.7
30	16.8	220	13.7	410	11.7
40	16.3	230	13.6	420	11.7
50	15.4	240	13.2	429	11.7
60	15.4	250	13.2	441	11.7
70	15.1	260	13.2		
80	15.0	271	13.2		
90	14.9	281	13.1		
99	14.9	290	13.2		
110	14.7	300	13.0		
120	14.6	309	12.9		
130	14.4	320	12.7		
140	14.4	330	12.5		
150	14.4	340	12.2		
160	14.3	350	12.1		
170	14.3	360	12.0		
180	14.2	370	11.8		
190	14.1	380	11.7		

XBT DROP 118 28 29.1N 112 36.5W 23 NOV 84 2354 MST



XBT DROP 118 T-7 RADAR: none GULF COORDS: -31.0 226.5
JDAY 329 654Z DEPTH 424m/424m SST 17.92 2M TEMPS: SAIL 17.93 XBT 17.98
GULF OF CALIFORNIA: END AXBT2 LINE, AXBT2-17, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
9	18.0	200	11.2	390	8.7
20	17.9	210	10.9	400	8.7
30	17.7	220	10.7	410	8.7
40	17.7	230	10.5	420	8.7
50	17.5	239	10.3		
60	17.4	250	10.3		
70	17.2	260	10.2		
80	17.2	270	9.9		
90	16.3	280	9.7		
100	14.9	290	9.6		
110	14.1	300	9.5		
120	13.3	310	9.5		
130	13.2	321	9.3		
140	13.0	330	9.3		
150	12.7	340	8.8		
160	12.5	349	8.7		
170	12.1	360	8.7		
180	11.6	370	8.7		
190	11.3	380	8.7		

San Esteban Sill

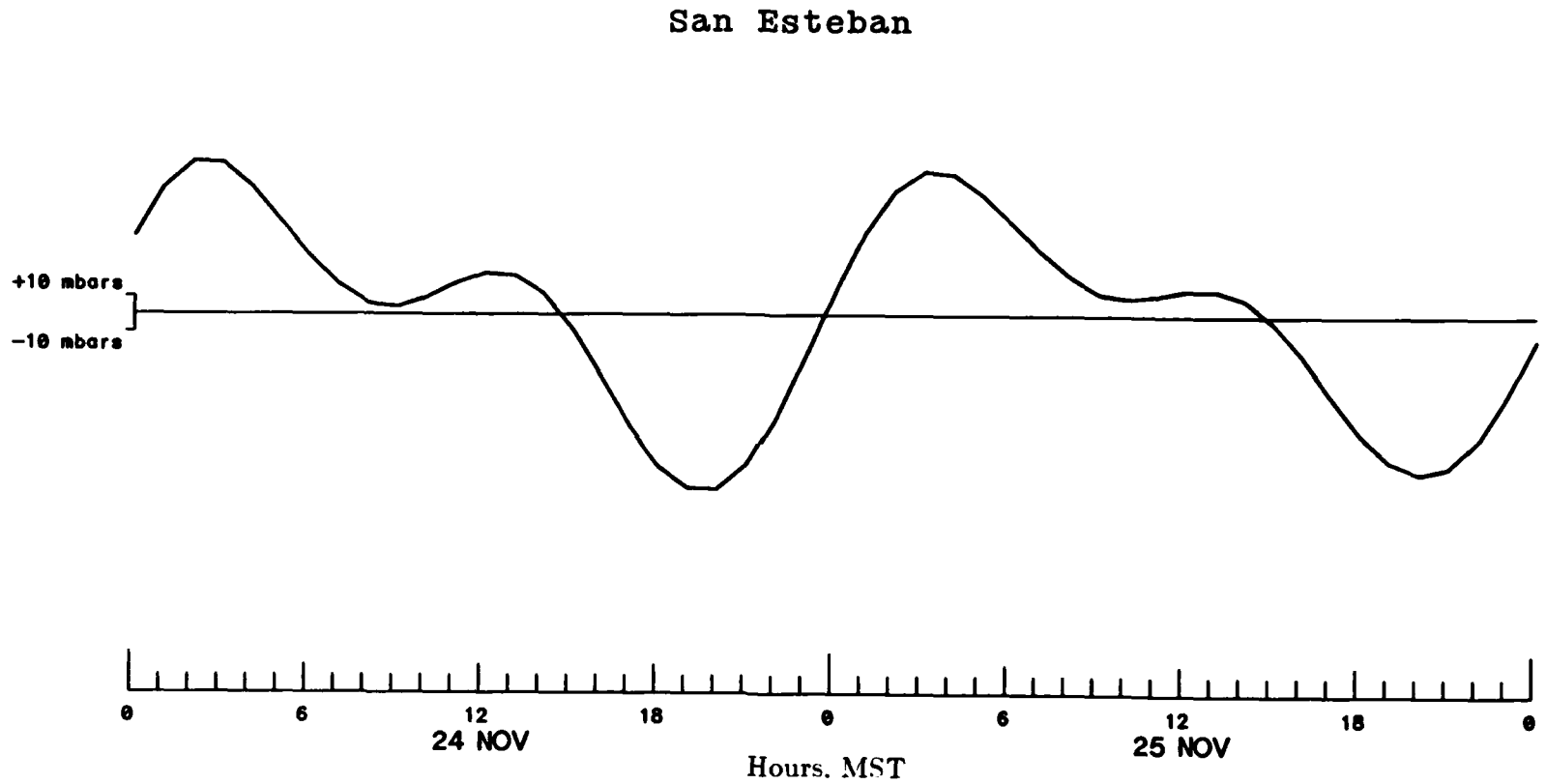


Figure 17. Bottom Pressure at San Esteban Island.
24-25 November 1984 - Spring Tides

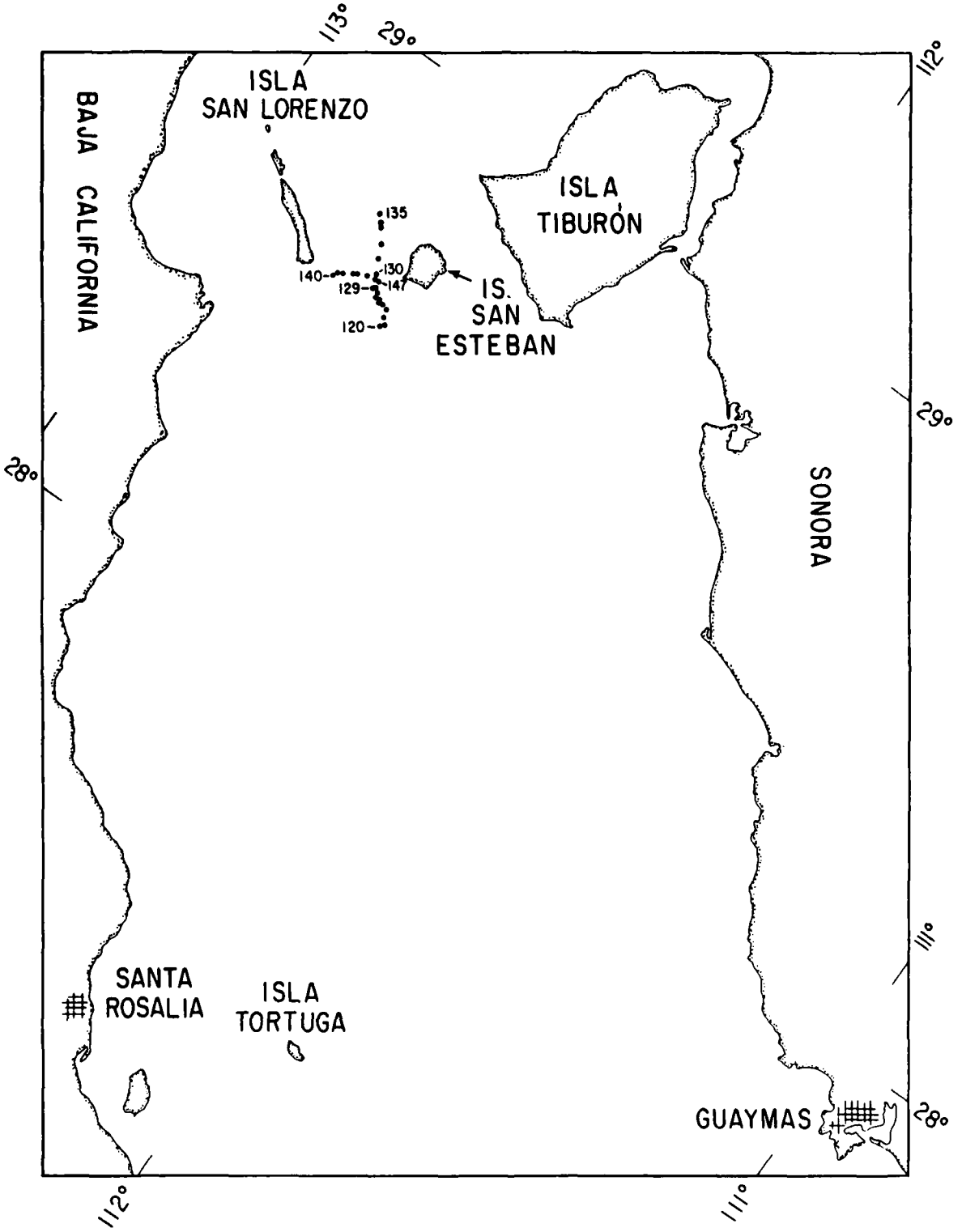


Figure 18. CAP1 Section: XBT Station Locations

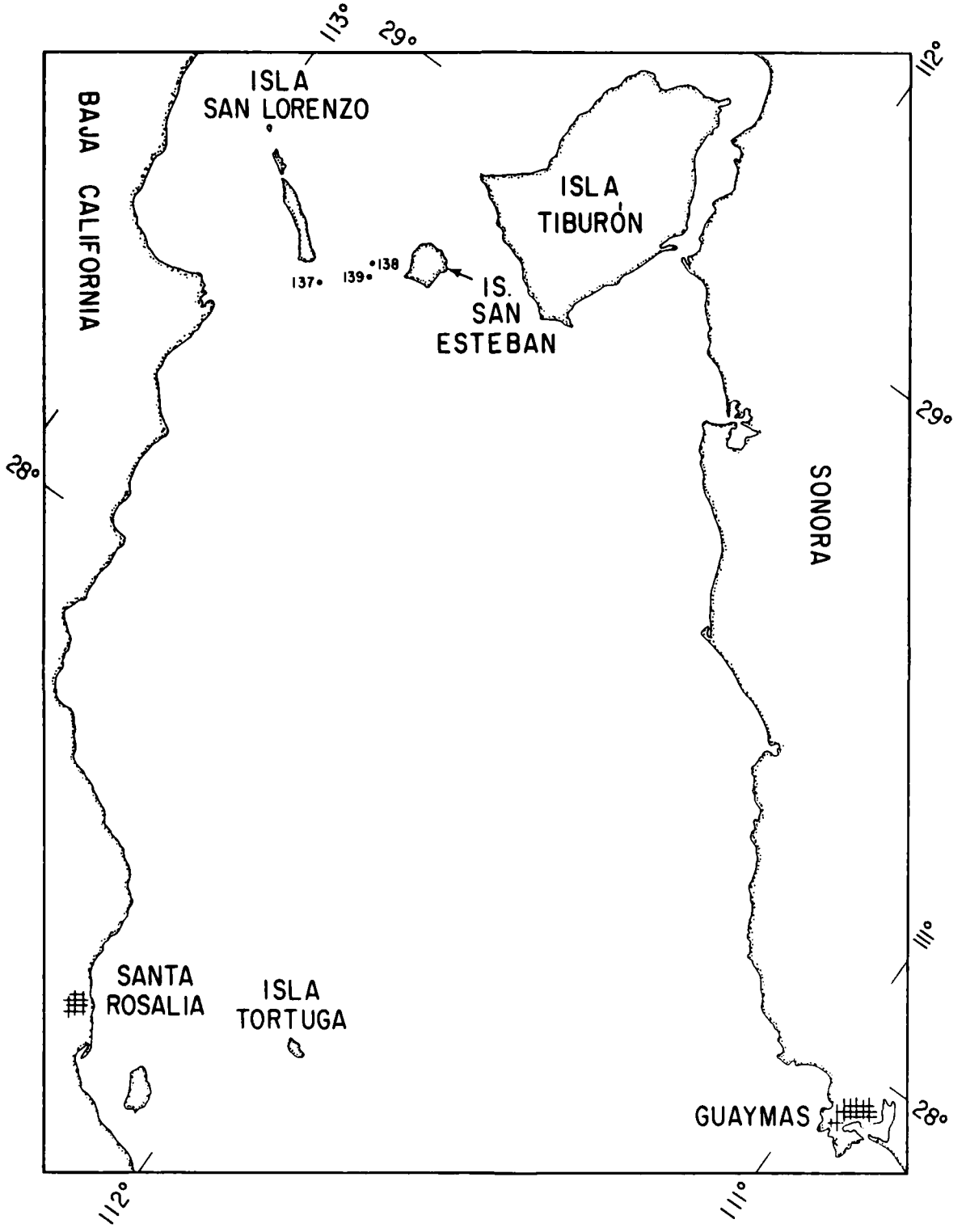
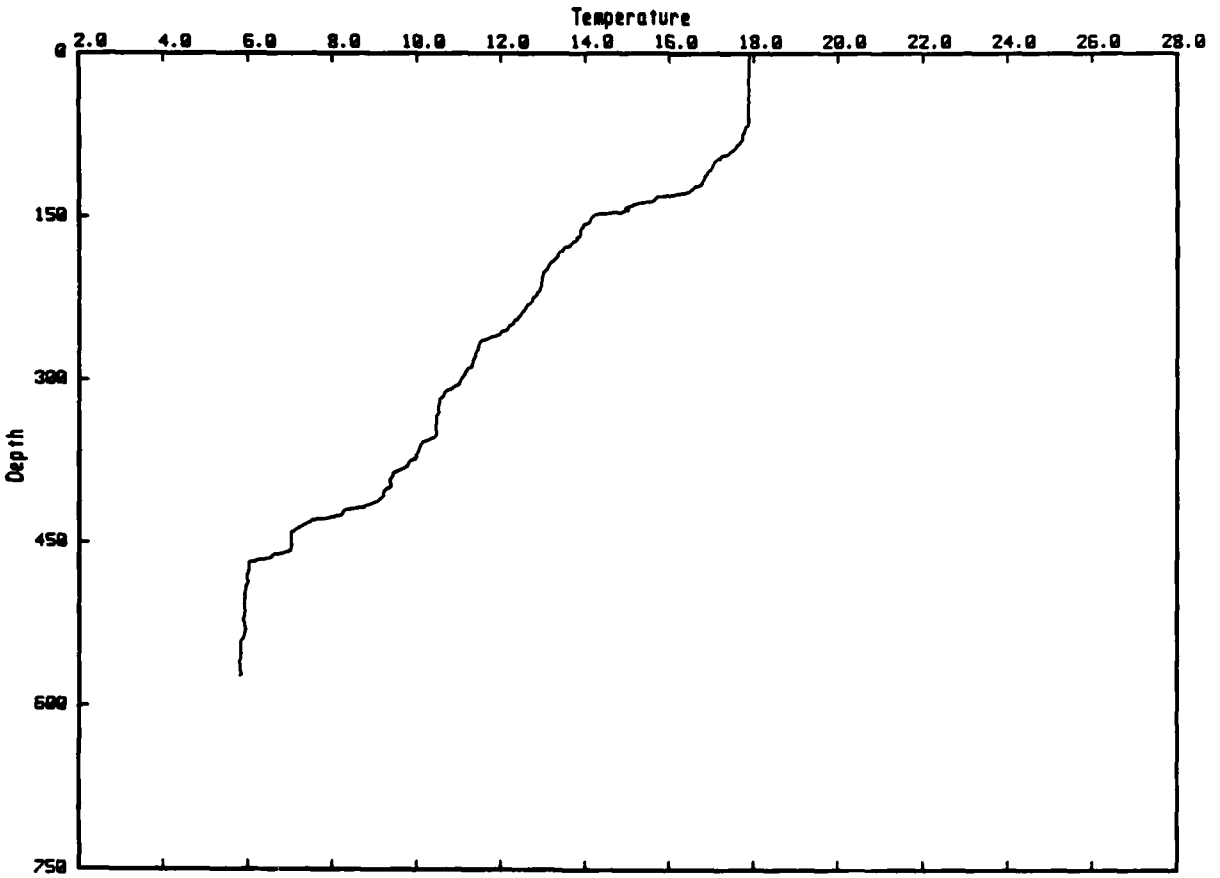


Figure 19. Miscellaneous Sill XBT Stations

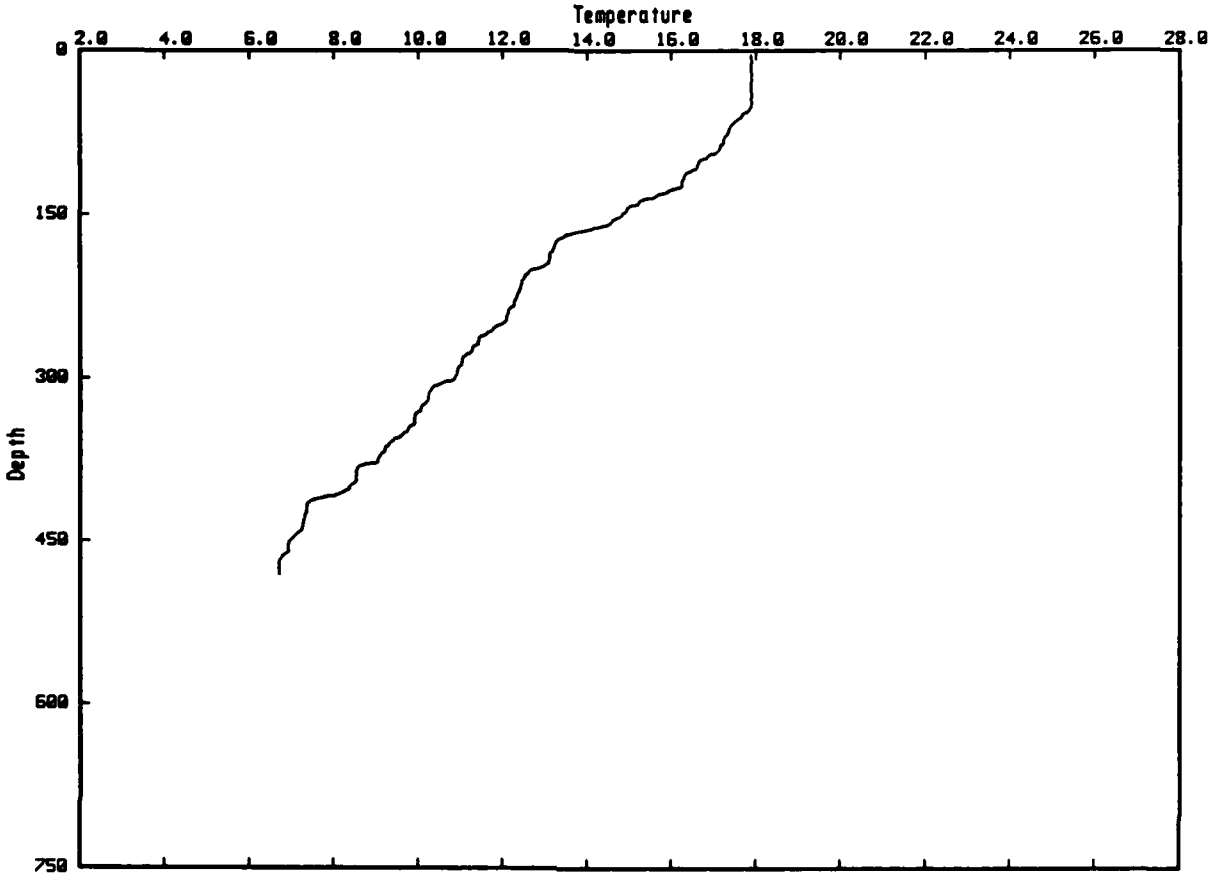
XBT DROP 120 28 34.2N 112 34.4W 24 NOV 84 0339 MST



XBT DROP 120 T-7 RADAR: none GULF COORDS: -22.6 232.1
JDAY 329 1039Z DEPTH 573m/573m SST 17.39 2M TEMPS: SAIL 18.07 XBT 17.90
GULF OF CALIFORNIA: BEGIN CAP N/S SILL LINE, CXP1-1, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	17.9	200	13.0	390	9.4
20	17.9	210	12.9	400	9.3
29	17.9	220	12.8	410	9.1
41	17.9	230	12.6	420	8.3
50	17.9	240	12.5	430	7.5
60	17.9	250	12.2	440	7.1
70	17.8	260	11.7	450	7.0
80	17.7	270	11.4	460	6.8
90	17.4	279	11.3	470	6.0
100	17.1	290	11.2	480	6.0
110	16.9	300	11.0	490	5.9
120	16.7	310	10.7	498	5.9
130	16.0	321	10.5	510	5.9
140	15.0	330	10.5	520	5.9
150	14.1	341	10.4	530	5.9
160	13.9	350	10.4	540	5.8
170	13.8	359	10.1	549	5.8
181	13.4	369	10.0	560	5.8
190	13.3	380	9.7	570	5.8

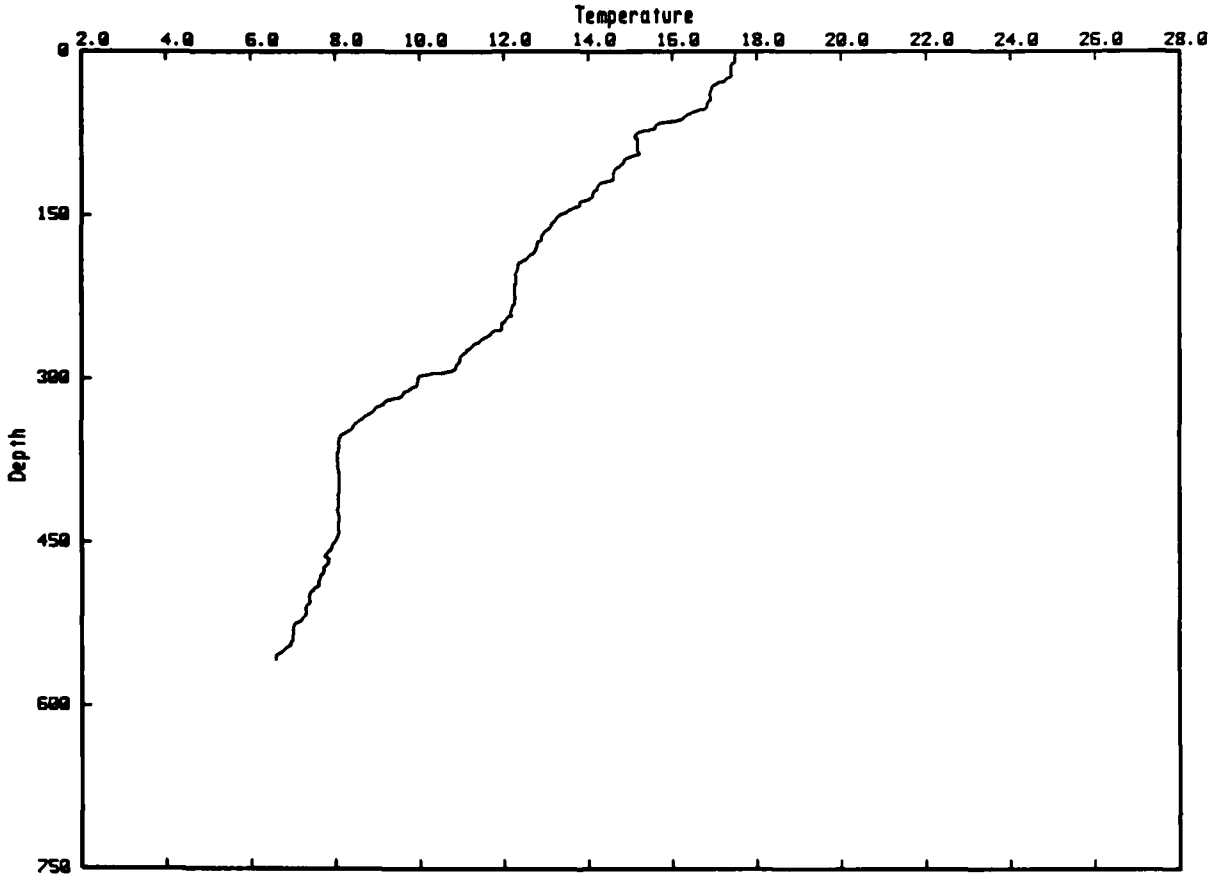
XBT DROP 121 28 34.6N 112 34.1W 24 NOV 84 0353 MST



XBT DROP 121 T-7 RADAR: none GULF COORDS: -21.8 232.4
JDAY 329 1053Z DEPTH 542m/481m SST 17.77 2M TEMPS: SAIL 17.98 XBT .00
GULF OF CALIFORNIA: SILL LINE, CXP1-2

Z	TEMP	Z	TEMP	Z	TEMP
10	17.9	200	12.7	391	8.5
19	17.9	210	12.4	400	8.4
30	17.9	220	12.4	410	7.7
39	17.9	230	12.3	420	7.4
50	17.9	240	12.1	430	7.3
60	17.7	251	11.9	441	7.2
70	17.4	260	11.6	451	6.9
80	17.2	270	11.3	460	6.9
90	17.1	280	11.1	470	6.7
100	16.6	290	10.9	480	6.7
110	16.4	300	10.8		
120	16.2	310	10.3		
130	15.8	320	10.2		
140	15.2	330	10.0		
150	14.8	340	9.9		
160	14.4	350	9.7		
171	13.4	360	9.3		
180	13.2	369	9.1		
190	13.1	380	8.7		

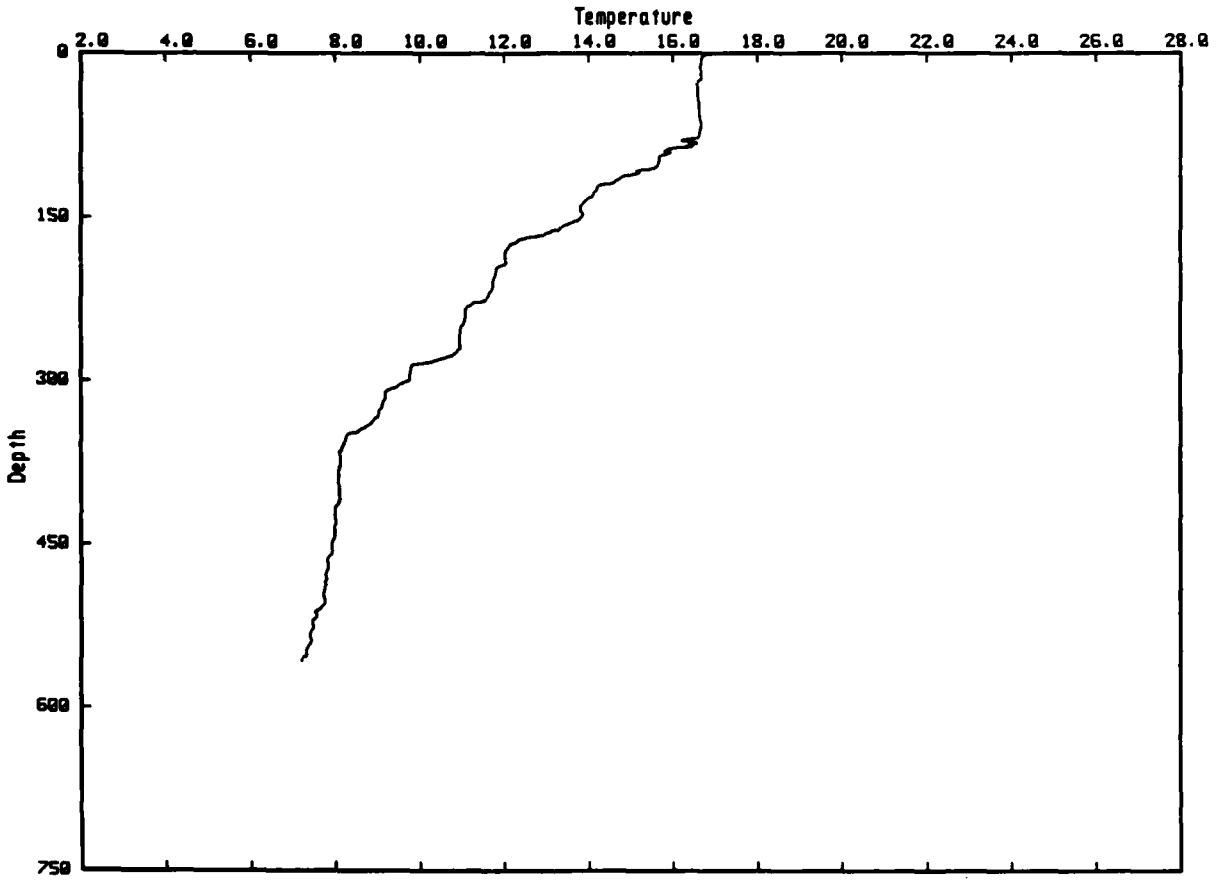
XBT DROP 122 28 35.2N 112 34.8W 24 NOV 84 0405 MST



XBT DROP 122 T-7 RADAR: none GULF COORDS: -22.0 233.9
JDAY 329 1105Z DEPTH 558m/558m SST 17.27 2M TEMPS: SAIL 17.75 XBT 17.50
GULF OF CALIFORNIA: SILL LINE, CXP1-3

Z	TEMP	Z	TEMP	Z	TEMP
10	17.5	200	12.3	389	8.1
20	17.4	210	12.3	401	8.1
30	17.1	220	12.2	409	8.1
39	16.9	230	12.3	420	8.1
50	16.8	240	12.2	430	8.1
60	16.3	250	11.9	441	8.1
70	15.6	260	11.6	450	8.0
80	15.2	270	11.2	460	7.8
90	15.2	280	11.0	470	7.8
100	14.9	291	10.9	480	7.6
110	14.6	300	10.0	490	7.6
120	14.3	310	9.8	500	7.4
130	14.1	320	9.2	510	7.3
139	13.8	330	8.9	520	7.2
150	13.3	340	8.5	530	7.0
160	13.1	350	8.2	540	7.0
170	12.9	360	8.1	550	6.7
180	12.8	370	8.1	558	6.6
190	12.5	380	8.1		

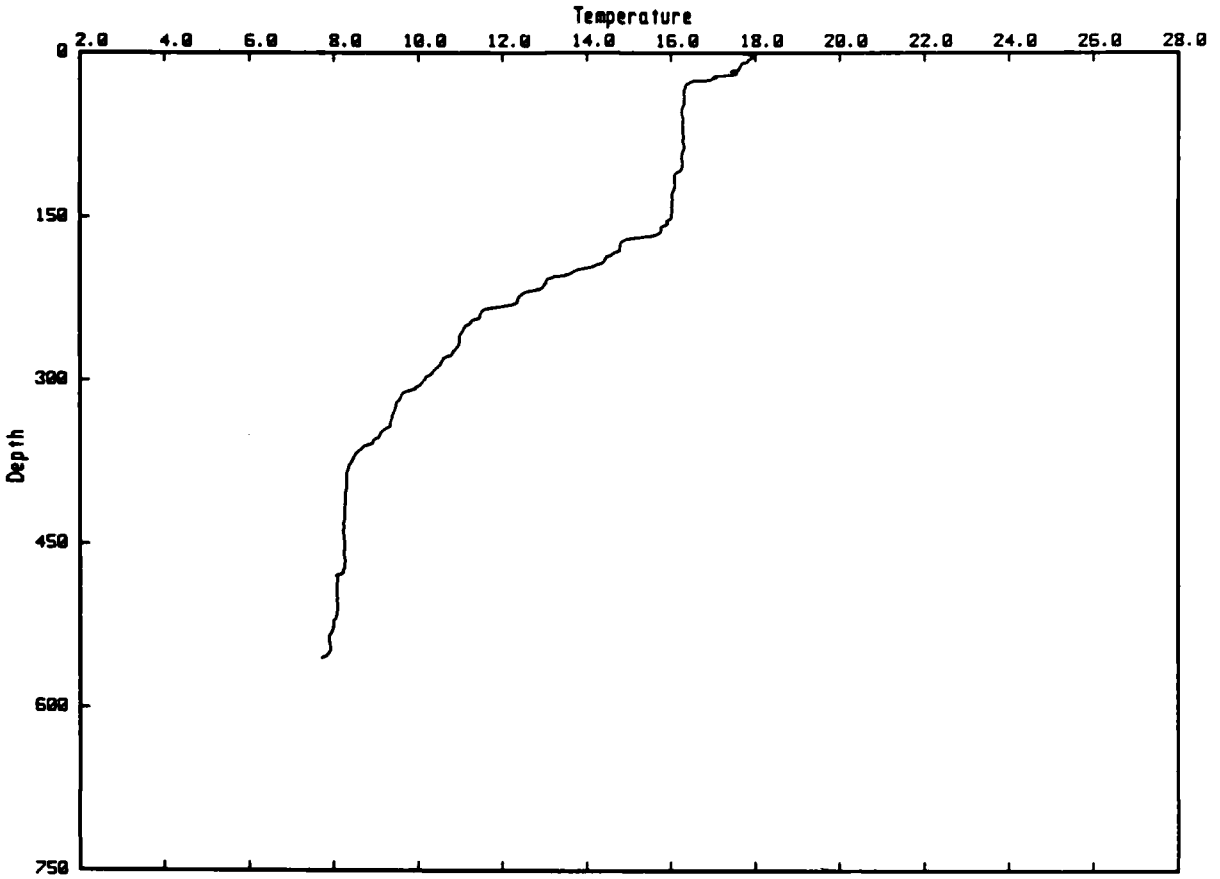
XBT DROP 123 28 36.0N 112 35.1W 24 NOV 84 0412 MST



XBT DROP 123 T-7 RADAR: none GULF COORDS: -21.5 235.4
JDAY 329 1112Z DEPTH 558m/558m SST 16.62 2M TEMPS: SAIL 16.98 XBT 16.69
GULF OF CALIFORNIA: SILL LINE, CXP1-4

Z	TEMP	Z	TEMP	Z	TEMP
10	16.7	201	11.8	390	8.1
20	16.7	210	11.7	400	8.1
29	16.6	220	11.6	410	8.1
41	16.6	230	11.2	420	8.0
49	16.6	241	11.1	430	8.0
60	16.6	250	11.0	441	8.0
71	16.6	261	11.0	451	7.9
80	16.2	270	11.0	461	7.9
90	15.8	280	10.5	471	7.8
100	15.7	291	9.8	480	7.8
110	15.1	300	9.8	490	7.8
120	14.3	310	9.2	500	7.8
130	14.1	320	9.1	510	7.6
140	13.8	330	9.0	521	7.5
150	13.8	340	8.8	529	7.4
160	13.3	350	8.3	540	7.4
170	12.4	360	8.2	549	7.3
179	12.1	370	8.1	558	7.2
190	12.0	380	8.1		

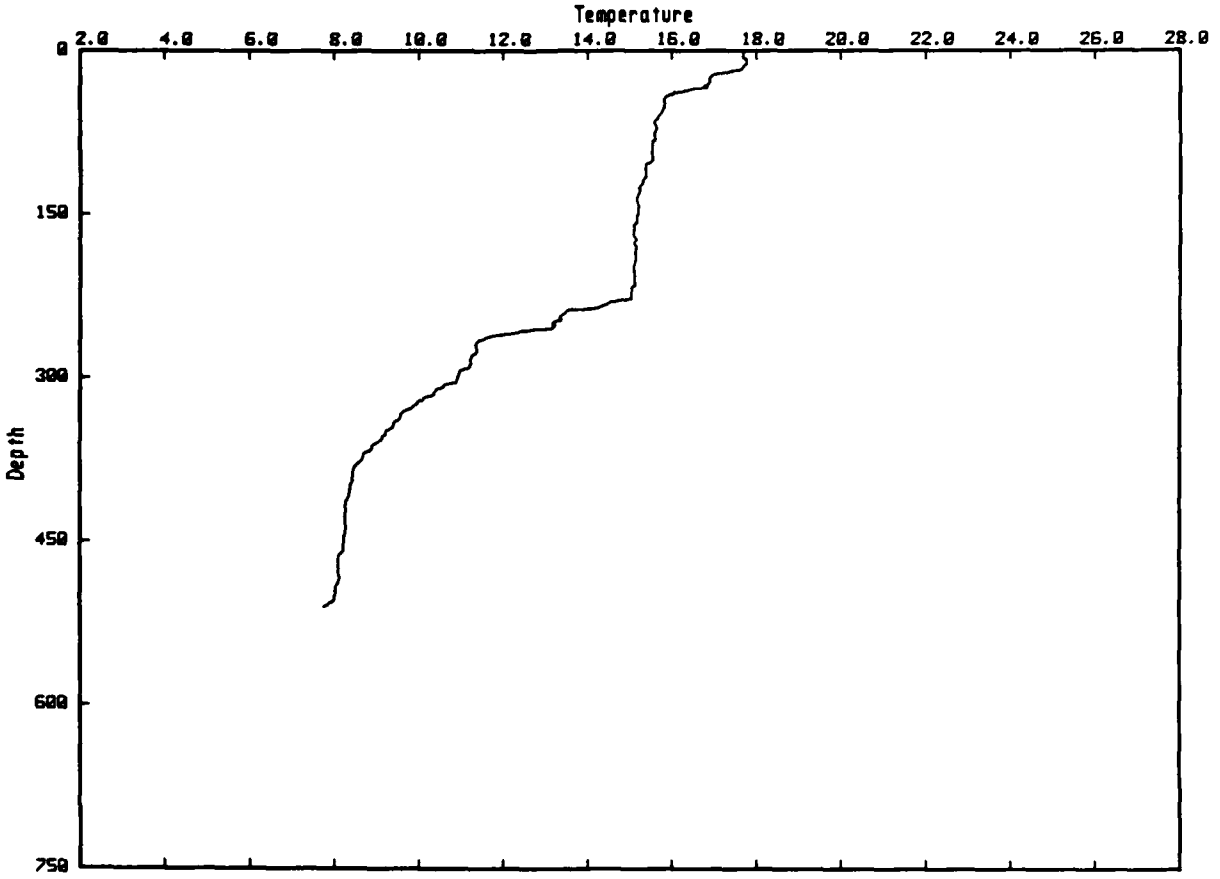
XBT DROP 124 28 36.2N 112 35.8W 24 NOV 84 0421 MST



XBT DROP 124 T-7 RADAR: none GULF COORDS: -22.2 236.4
JDAY 329 1121Z DEPTH 555m/555m SST 17.73 2M TEMPS: SAIL 17.97 XBT 17.99
GULF OF CALIFORNIA: SILL LINE, CXP1-5

Z	TEMP	Z	TEMP	Z	TEMP
10	17.7	200	13.7	390	8.3
20	17.5	210	13.0	400	8.3
30	16.3	220	12.5	411	8.3
39	16.3	230	12.3	421	8.3
50	16.3	240	11.5	431	8.2
60	16.3	250	11.1	440	8.2
71	16.3	260	11.0	450	8.3
80	16.3	270	10.9	460	8.2
89	16.3	280	10.6	470	8.3
99	16.3	290	10.4	480	8.1
110	16.1	300	10.1	490	8.1
120	16.1	310	9.7	500	8.1
130	16.0	321	9.5	510	8.1
140	16.0	330	9.4	520	8.0
150	16.0	340	9.4	530	8.0
160	15.8	350	9.1	541	7.9
170	14.9	361	8.7	550	7.9
181	14.8	370	8.5		
191	14.4	380	8.4		

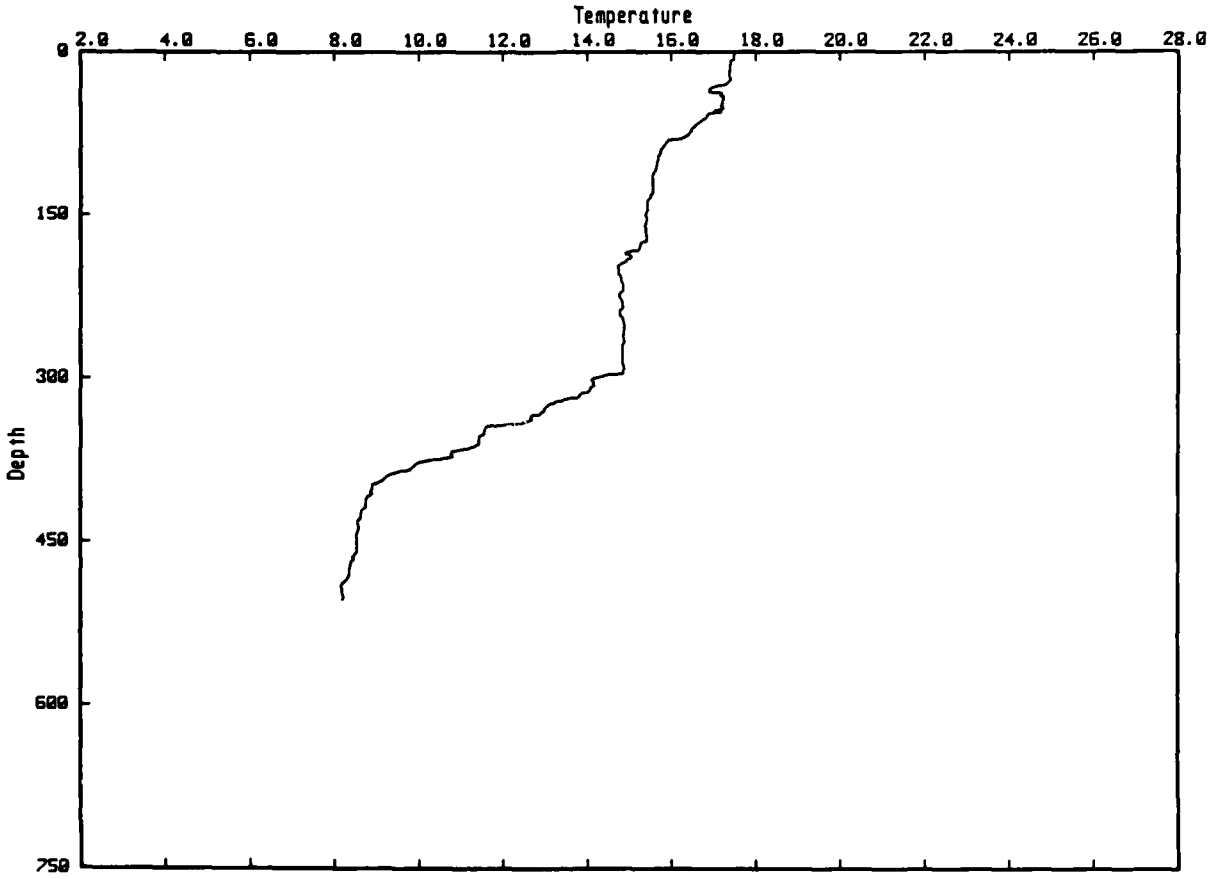
XBT DROP 125 28 36.1N 112 36.2W 24 NOV 84 0427 MST



XBT DROP 125 T-7 RADAR: none GULF COORDS: -22.9 236.6
JDAY 329 1127Z DEPTH 511m/511m SST 17.63 2M TEMPS: SAIL 17.99 XBT 17.70
GULF OF CALIFORNIA: SILL LINE, CXP1-6

Z	TEMP	Z	TEMP	Z	TEMP
10	17.8	201	15.1	390	8.4
20	17.3	209	15.1	400	8.4
30	16.9	221	15.0	410	8.3
40	16.1	230	14.5	420	8.3
50	15.8	240	13.5	429	8.3
59	15.7	250	13.2	439	8.3
70	15.6	260	12.0	451	8.2
81	15.6	270	11.4	460	8.2
90	15.5	279	11.3	470	8.1
100	15.5	290	11.2	480	8.1
111	15.4	304	10.9	490	8.1
120	15.3	310	10.5	500	8.0
129	15.2	320	10.1	509	7.8
140	15.2	330	9.7		
150	15.2	340	9.5		
160	15.1	350	9.2		
170	15.1	360	9.0		
180	15.2	370	8.7		
189	15.1	380	8.5		

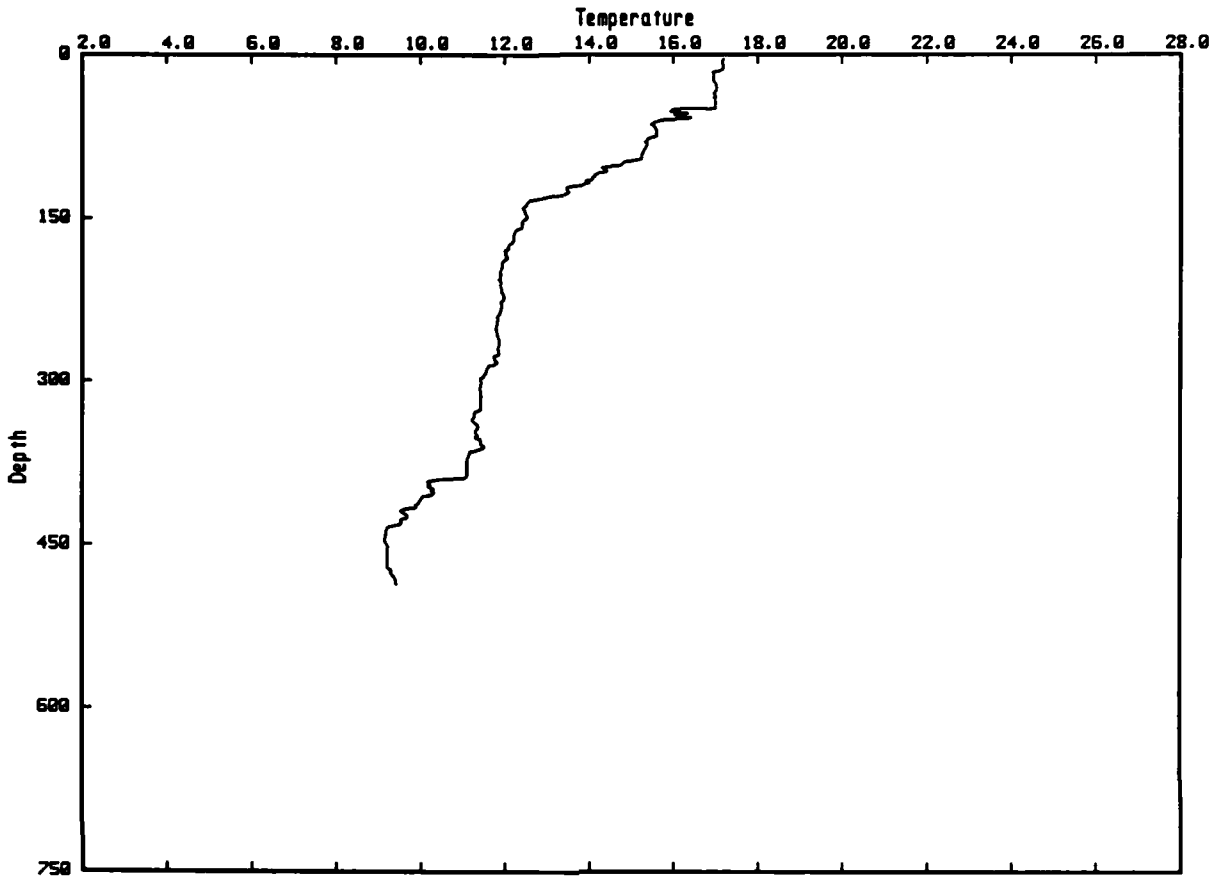
XBT DROP 126 28 36.4N 112 36.4W 24 NOV 84 0433 MST



XBT DROP 126 T-7 RADAR: none GULF COORDS: -22.8 237.3
JDAY 329 1133Z DEPTH 503m/503m SST 17.48 2M TEMPS: SAIL 17.50 XBT 17.49
GULF OF CALIFORNIA: SILL LINE, CXP1-7

Z	TEMP	Z	TEMP	Z	TEMP
10	17.4	200	14.7	390	9.3
20	17.4	209	14.8	400	8.9
30	17.3	220	14.9	410	8.8
40	17.2	231	14.8	420	8.7
50	17.2	240	14.8	430	8.6
60	16.8	250	14.9	439	8.6
70	16.5	261	14.9	450	8.5
80	16.1	270	14.9	460	8.5
90	15.7	281	14.9	470	8.4
100	15.7	291	14.9	481	8.4
110	15.6	300	14.1	491	8.2
120	15.6	310	14.1	501	8.2
130	15.6	320	13.4		
141	15.4	330	13.0		
150	15.4	340	12.5		
160	15.4	351	11.6		
170	15.4	360	11.4		
180	15.2	370	10.8		
190	15.0	380	9.9		

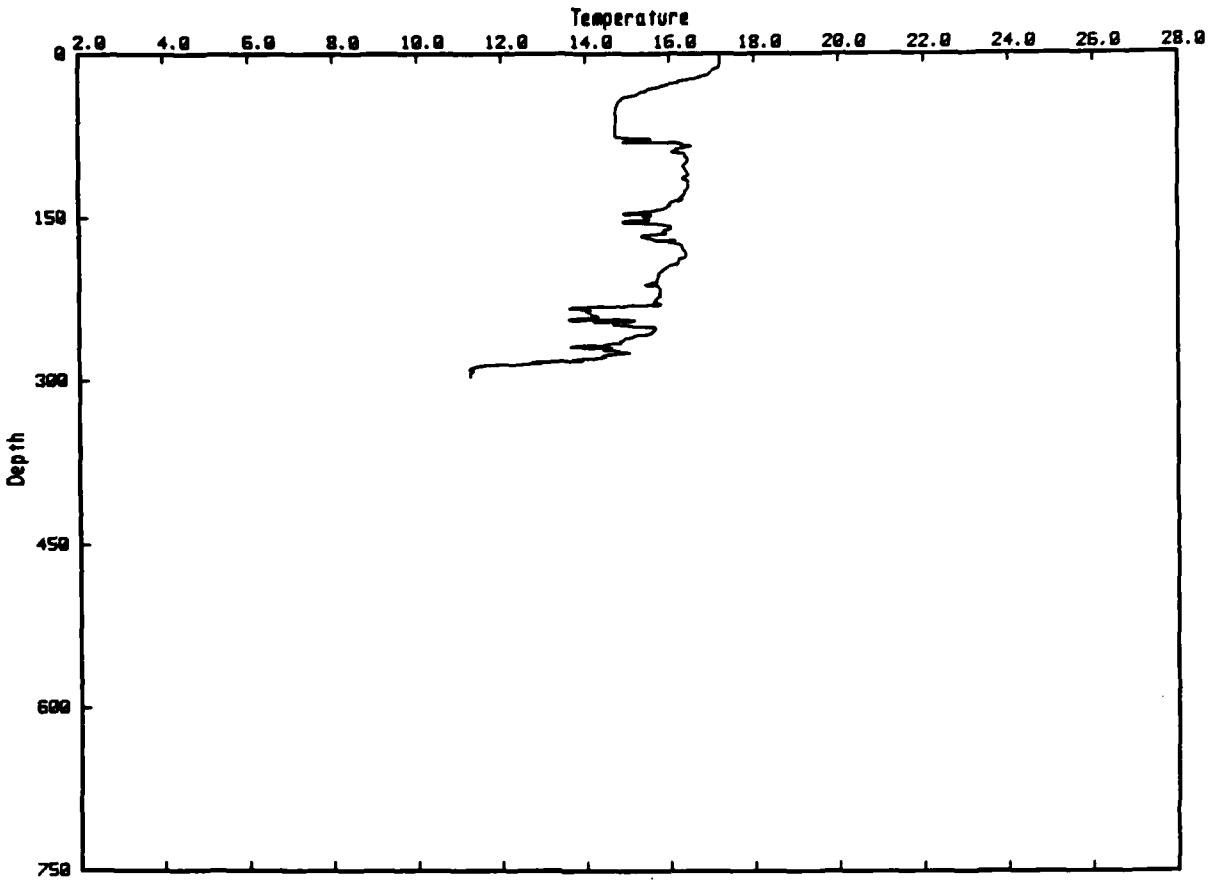
XBT DROP 128 28 36.9N 112 37.1W 24 NOV 84 0445 MST



XBT DROP 128 T-7 RADAR: none GULF COORDS: -23.2 238.7
JDAY 329 1145Z DEPTH 488m/488m SST 17.23 2M TEMPS: SAIL 17.50 XBT 17.19
GULF OF CALIFORNIA: SILL LINE, CXP1-9

Z	TEMP	Z	TEMP	Z	TEMP
10	17.2	200	11.9	390	10.5
20	17.0	210	11.9	400	10.3
30	17.0	220	12.0	410	10.0
40	17.0	230	11.9	420	9.6
50	16.1	240	11.8	430	9.5
60	15.7	250	11.8	440	9.2
69	15.6	259	11.9	450	9.2
80	15.3	269	11.8	461	9.2
90	15.3	280	11.8	470	9.2
100	14.8	290	11.6	480	9.4
110	14.1	301	11.4		
120	13.8	310	11.4		
130	13.0	320	11.4		
140	12.4	329	11.3		
150	12.5	340	11.3		
160	12.3	350	11.4		
169	12.2	360	11.5		
180	12.0	370	11.1		
191	11.9	380	11.1		

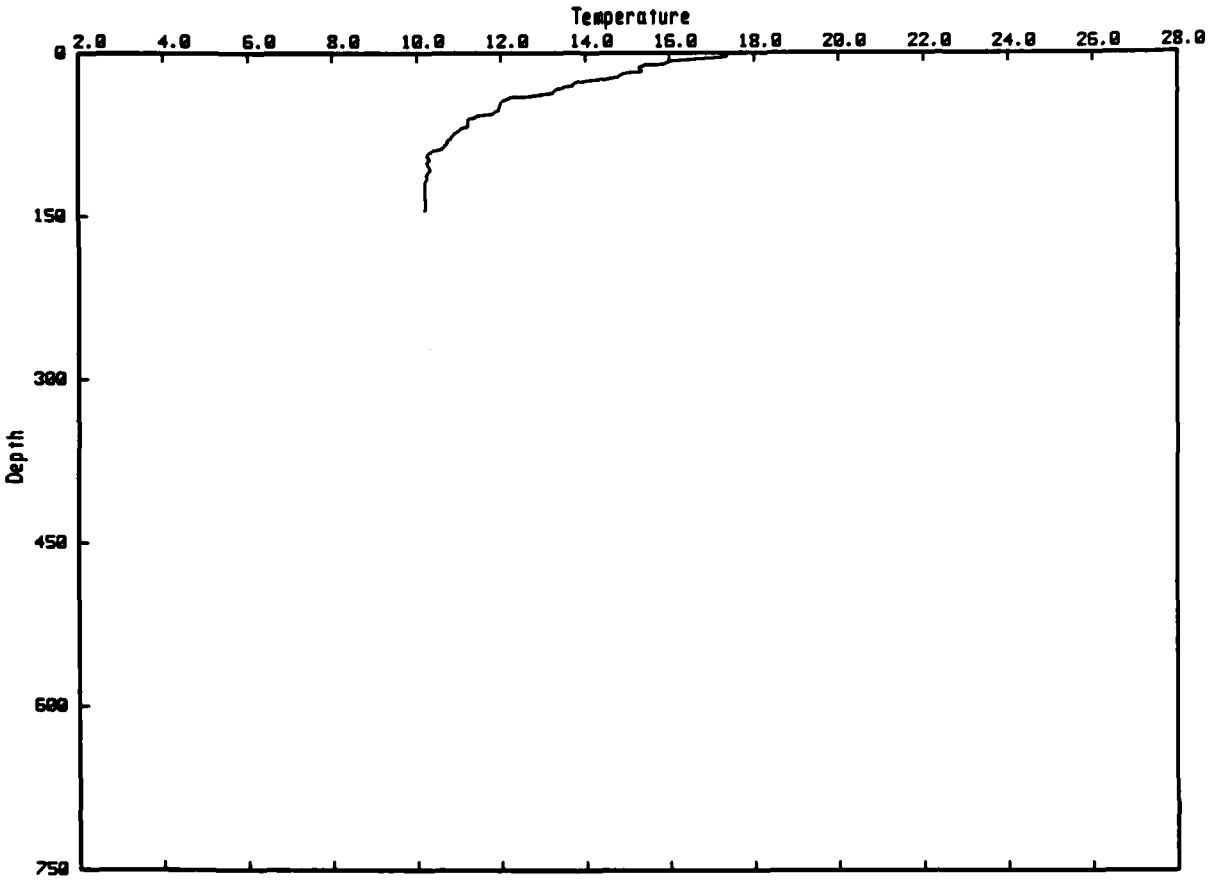
XBT DROP 129 28 37.2N 112 37.6W 24 NOV 84 0457 MST



XBT DROP 129 T-7 RADAR: none GULF COORDS: -23.5 239.6
JDAY 329 1157Z DEPTH 298m/298m SST 17.20 2M TEMPS: SAIL 17.28 XBT 17.19
GULF OF CALIFORNIA: SILL LINE, CXP1-10 (DATA QUALITY UNCERTAIN)

Z	TEMP	Z	TEMP
11	17.2	200	15.8
20	16.9	210	15.6
30	15.8	220	15.7
40	14.9	230	15.8
50	14.7	240	14.2
60	14.7	250	15.1
70	14.7	260	15.1
80	14.9	270	13.9
90	16.1	280	14.2
100	16.4	290	11.2
110	16.4	298	11.2
120	16.4		
130	16.3		
140	16.0		
150	15.5		
160	16.0		
170	15.6		
180	16.3		
190	16.2		

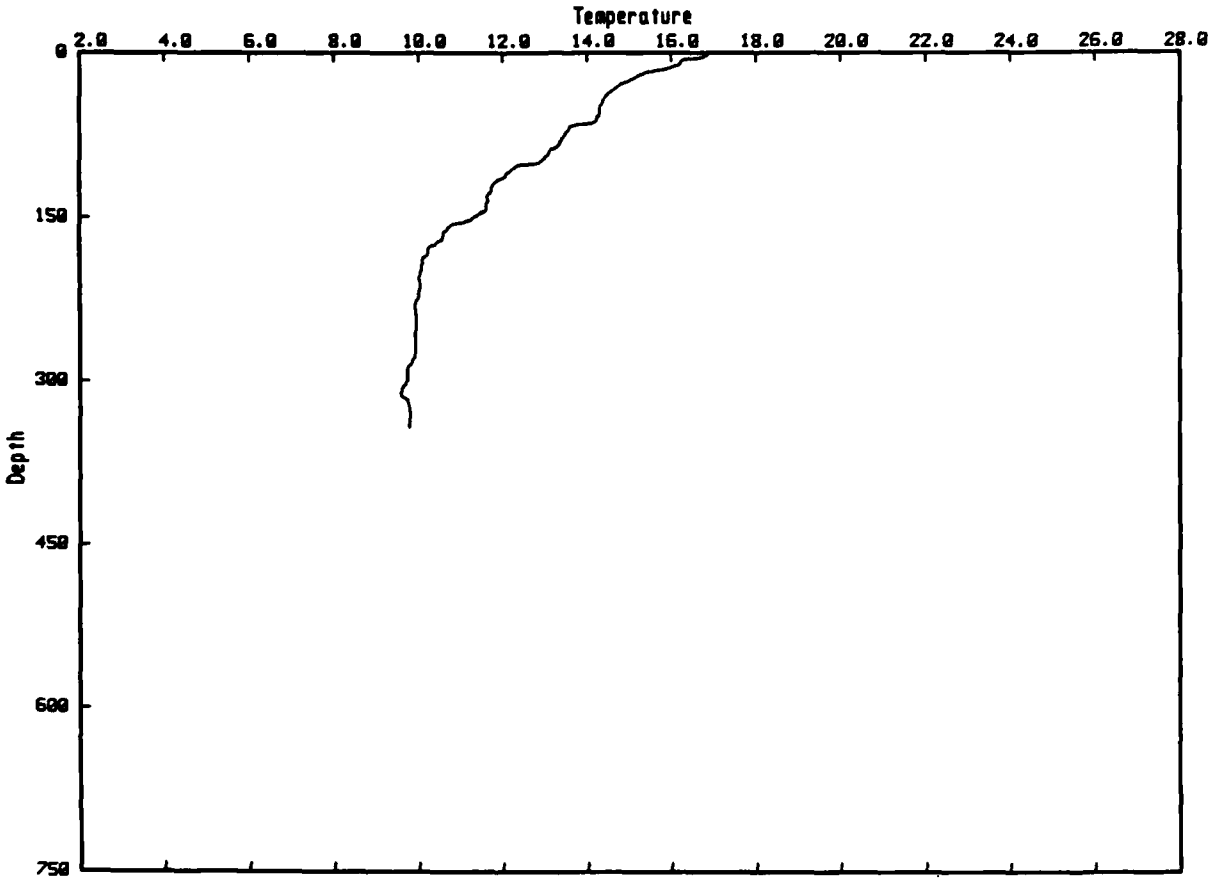
XBT DROP 130 28 38.5N 112 38.6W 24 NOV 84 0514 MST



XBT DROP 130 T-7 RADAR: none GULF COORDS: -23.4 242.5
JDAY 329 1214Z DEPTH 145m/145m SST 17.15 2M TEMPS: SAIL 17.42 XBT 17.35
GULF OF CALIFORNIA: SILL LINE, CXP1-11

Z	TEMP
10	15.9
20	14.9
30	13.7
40	12.7
50	12.0
60	11.3
70	11.1
80	10.7
90	10.4
100	10.3
110	10.3
119	10.2
130	10.2
141	10.2

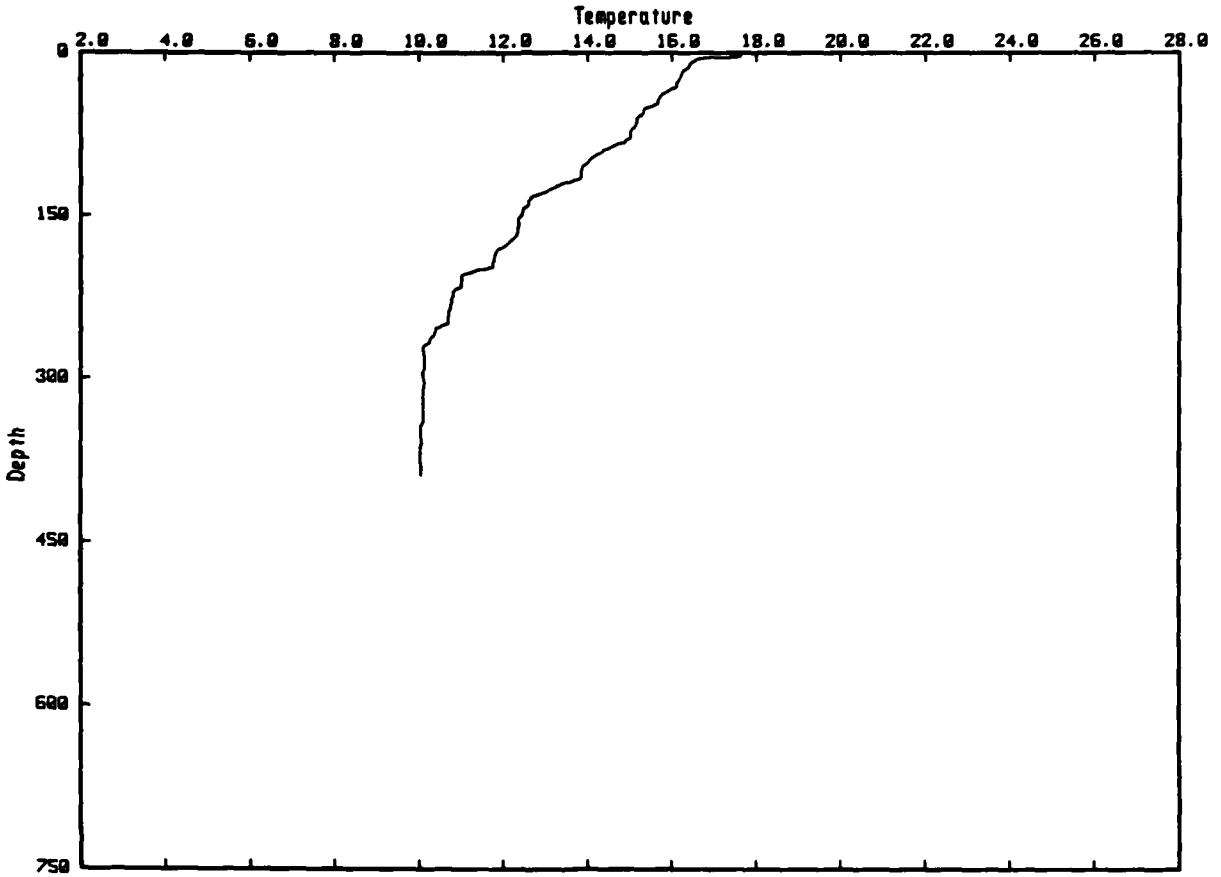
XBT DROP 131 28 40.0N 112 39.4W 24 NOV 84 0532 MST



XBT DROP 131 T-7 RADAR: none GULF COORDS: -22.8 245.5
JDAY 329 1232Z DEPTH 345m/345m SST 16.70 2M TEMPS: SAIL 17.05 XBT 16.76
GULF OF CALIFORNIA: SILL LINE, CXP1-12

Z	TEMP	Z	TEMP
10	16.2	200	10.0
20	15.3	209	10.0
30	14.8	220	10.0
40	14.4	229	9.9
50	14.3	240	9.9
60	14.2	250	9.9
70	13.6	260	9.9
80	13.4	270	9.9
90	13.1	280	9.9
100	12.9	290	9.7
110	12.1	300	9.7
120	11.8	310	9.6
130	11.6	320	9.8
140	11.6	331	9.8
150	11.3	339	9.8
161	10.7		
170	10.6		
180	10.2		
190	10.1		

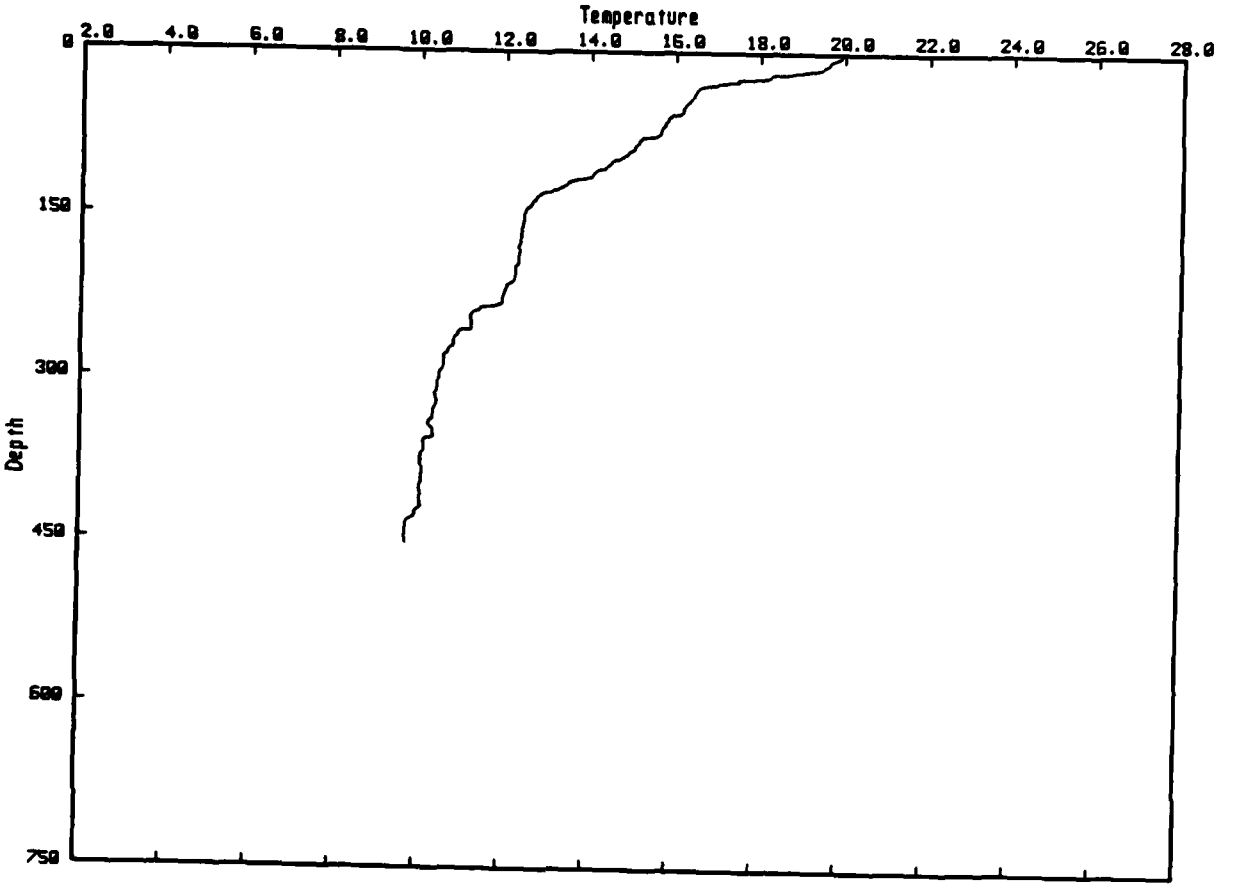
XBT DROP 132 28 41.4N 112 40.2W 24 NOV 84 0544 MST



XBT DROP 132 T-7 RADAR: none GULF COORDS: -22.4 248.4
JDAY 329 1244Z DEPTH 390m/390m SST 17.40 2M TEMPS: SAIL 17.66 XBT 17.49
GULF OF CALIFORNIA: SILL LINE, CXP1-13

Z	TEMP	Z	TEMP	Z	TEMP
10	16.4	200	11.4	389	10.1
20	16.2	210	11.0		
30	16.1	220	10.8		
40	15.7	230	10.8		
50	15.4	241	10.7		
60	15.2	250	10.6		
70	15.1	260	10.4		
80	14.9	270	10.1		
90	14.4	280	10.1		
100	14.0	291	10.1		
110	13.8	300	10.1		
120	13.4	311	10.1		
130	12.9	320	10.1		
140	12.6	330	10.1		
150	12.4	340	10.1		
160	12.4	351	10.1		
170	12.3	360	10.1		
180	11.9	370	10.0		
190	11.8	380	10.1		

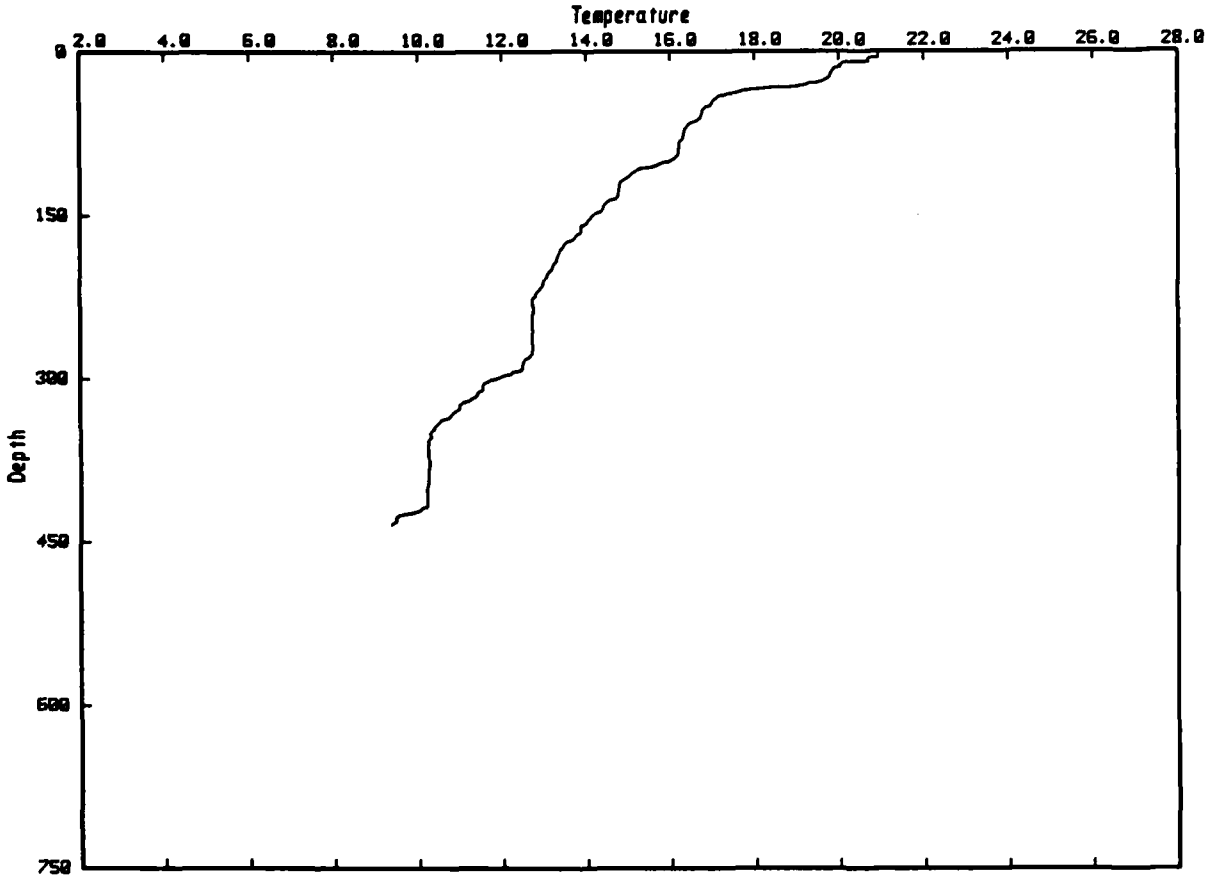
XBT DROP 133 28 42.9N 112 41.4W 24 NOV 84 0556 MST



XBT DROP 133 T-7 RADAR: none GULF COORDS: -22.3 251.8
JDAY 329 1256Z DEPTH 452m/452m SST 19.50 2M TEMPS: SAIL 19.56 XBT 19.89
GULF OF CALIFORNIA: SILL LINE, CXP1-14

Z	TEMP	Z	TEMP	Z	TEMP
10	19.6	200	12.2	390	10.1
20	18.3	210	12.2	400	10.1
30	16.8	220	12.0	409	10.1
39	16.4	230	11.9	420	10.1
50	16.2	240	11.2	430	9.8
60	15.9	249	11.2	440	9.7
70	15.7	261	10.9	450	9.7
80	15.2	270	10.8		
90	15.0	280	10.6		
100	14.5	290	10.6		
110	14.1	299	10.5		
120	13.5	309	10.4		
130	12.8	320	10.4		
140	12.6	330	10.3		
150	12.4	341	10.2		
159	12.4	350	10.3		
171	12.4	360	10.1		
180	12.3	370	10.1		
191	12.3	379	10.1		

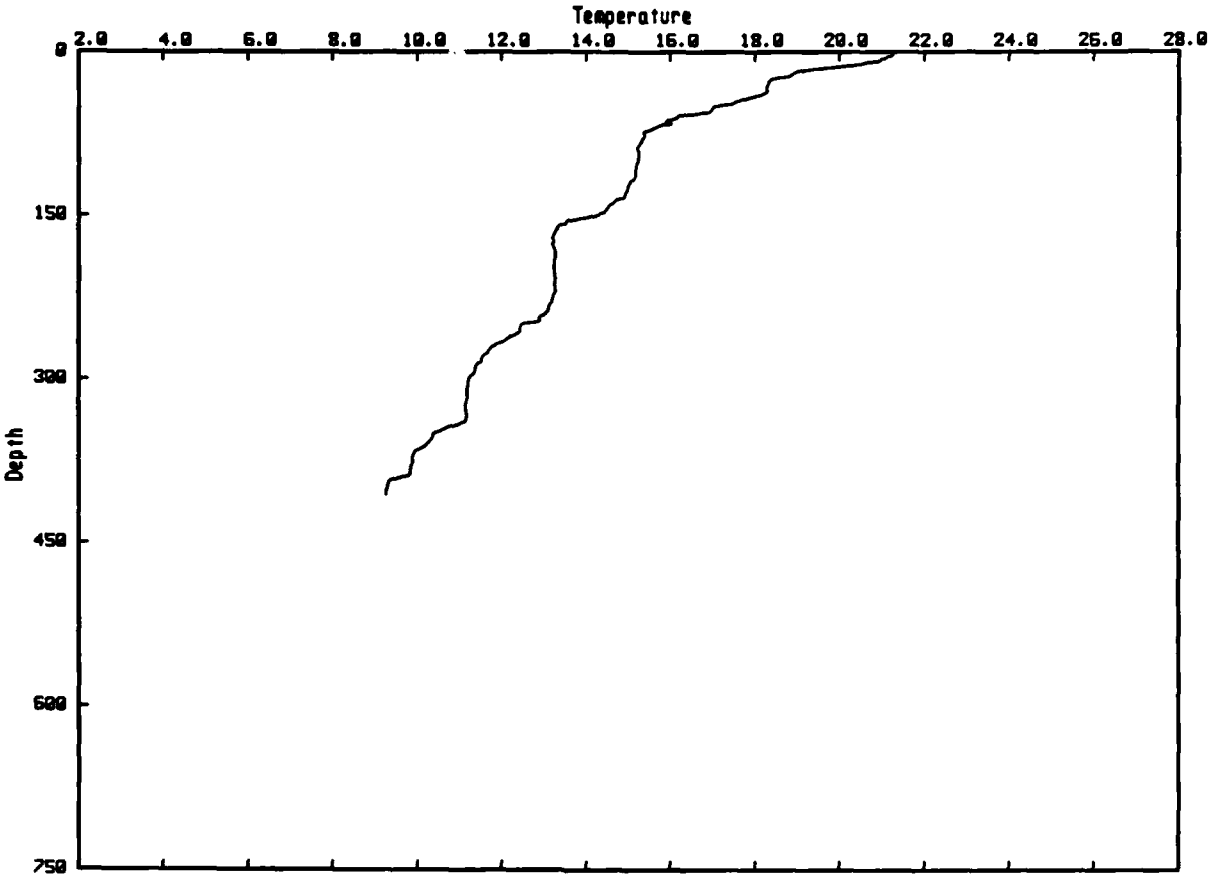
XBT DROP 134 28 43.3N 112 41.8W 24 NOV 84 0602 MST



XBT DROP 134 T-7 RADAR: none GULF COORDS: -22.4 252.7
JDAY 329 1302Z DEPTH 435m/434m SST 20.61 2M TEMPS: SAIL 21.12 XBT 20.94
GULF OF CALIFORNIA: SILL LINE, CXP1-15

Z	TEMP	Z	TEMP	Z	TEMP
10	20.2	200	13.1	390	10.2
20	19.8	211	13.0	400	10.2
30	19.3	220	12.8	410	10.2
40	17.3	229	12.7	420	10.1
50	16.9	239	12.7	430	9.5
60	16.7	250	12.7		
70	16.4	260	12.7		
80	16.3	271	12.7		
90	16.2	280	12.6		
100	16.0	290	12.5		
110	15.1	300	11.8		
120	14.8	310	11.5		
131	14.8	320	11.2		
140	14.4	330	10.9		
150	14.1	340	10.5		
160	13.9	350	10.3		
170	13.7	360	10.2		
180	13.4	371	10.2		
191	13.3	380	10.3		

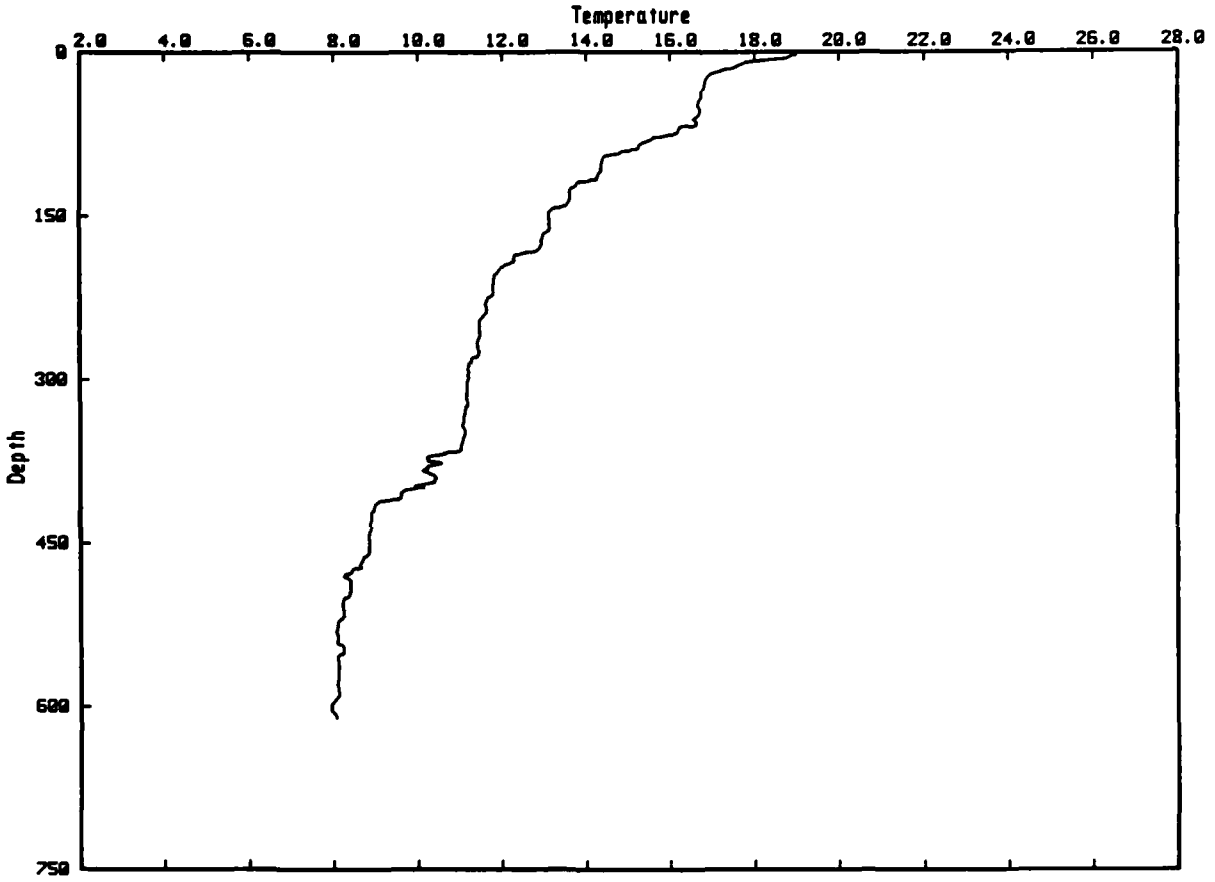
XBT DROP 135 28 44.0N 112 42.5W 24 NOV 84 0614 MST



XBT DROP 135 T-7 RADAR: none GULF COORDS: -22.6 254.5
JDAY 329 1314Z DEPTH 408m/408m SST 20.90 2M TEMPS: SAIL 21.36 XBT 21.16
GULF OF CALIFORNIA: END CAP SILL LINE, CXP1-16, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	20.6	200	13.2	390	9.6
20	18.9	211	13.3	400	9.3
29	18.3	220	13.3	407	9.3
40	18.1	230	13.2		
50	17.1	240	13.0		
60	16.2	250	12.4		
70	15.6	260	12.3		
79	15.3	270	11.8		
90	15.2	280	11.5		
100	15.2	290	11.4		
110	15.2	299	11.2		
120	15.0	309	11.2		
130	14.9	319	11.2		
140	14.6	330	11.2		
150	14.2	340	11.1		
160	13.3	350	10.4		
170	13.2	360	10.2		
181	13.2	370	9.9		
190	13.3	380	9.9		

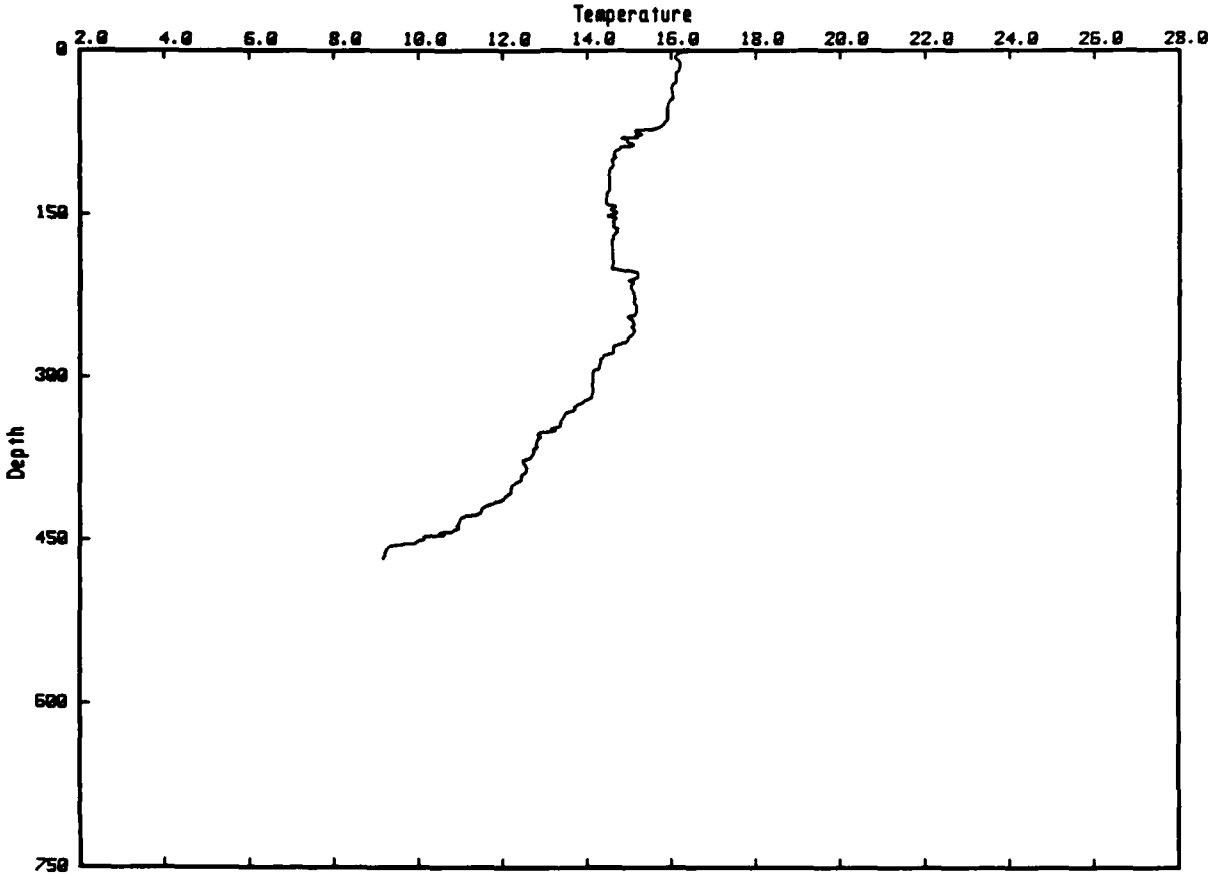
XBT DROP 137 28 34.1N 112 43.6W 24 NOV 84 1508 MST



XBT DROP 137 T-7 RADAR: none GULF COORDS: -34.9 240.8
JDAY 329 2208Z DEPTH 611m/610m SST 18.95 2M TEMPS: SAIL 18.80 XBT 18.87
GULF OF CALIFORNIA: SILL REGION, NEAR FRONT

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	17.8	200	11.9	390	10.4	580	8.1
20	16.9	209	11.8	400	9.9	591	8.1
31	16.8	221	11.8	410	9.5	601	7.9
40	16.7	231	11.6	420	8.9		
50	16.7	240	11.6	430	8.9		
60	16.6	250	11.5	439	8.8		
70	16.2	260	11.5	450	8.8		
80	15.5	270	11.4	460	8.8		
90	15.0	280	11.3	470	8.6		
100	14.4	290	11.2	480	8.2		
110	14.3	300	11.2	489	8.4		
120	13.8	310	11.2	500	8.3		
130	13.6	321	11.2	510	8.2		
140	13.5	330	11.1	520	8.1		
150	13.1	341	11.1	530	8.1		
160	13.1	351	11.1	540	8.1		
170	13.0	360	11.0	550	8.2		
180	12.9	370	10.3	560	8.1		
190	12.3	380	10.2	569	8.1		

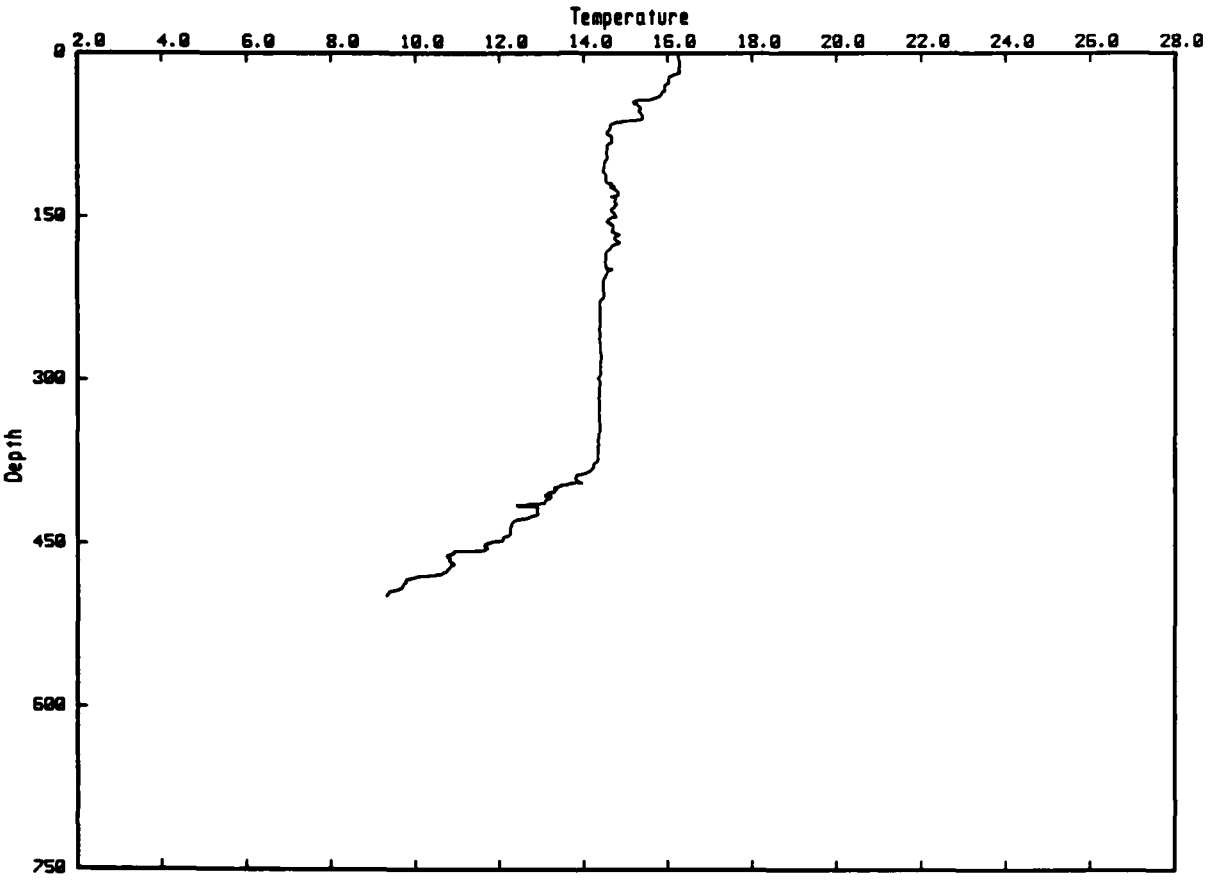
XBT DROP 138 28 39.1N 112 39.8W 24 NOV 84 1954 MST



XBT DROP 138 T-7 RADAR: none GULF COORDS: -24.4 244.6
JDAY 330 254Z DEPTH 468m/468m SST 16.25 2M TEMPS: SAIL 16.30 XBT 16.13
GULF OF CALIFORNIA: SILL REGION, DOWNCAST OF CTD STATION PC6114

Z	TEMP	Z	TEMP	Z	TEMP
10	16.2	200	14.6	390	12.4
20	16.1	210	15.0	399	12.2
30	16.1	220	15.1	410	12.1
40	16.0	230	15.1	420	11.6
50	15.9	239	15.2	430	11.0
60	15.9	250	15.1	440	10.9
70	15.7	260	15.1	450	10.1
80	14.8	270	14.8	460	9.2
90	14.8	280	14.4	468	9.2
100	14.6	290	14.3		
110	14.5	299	14.1		
119	14.5	309	14.1		
130	14.5	320	14.1		
140	14.4	330	13.7		
150	14.6	340	13.4		
160	14.6	350	13.1		
169	14.6	359	12.8		
179	14.6	370	12.7		
190	14.6	379	12.5		

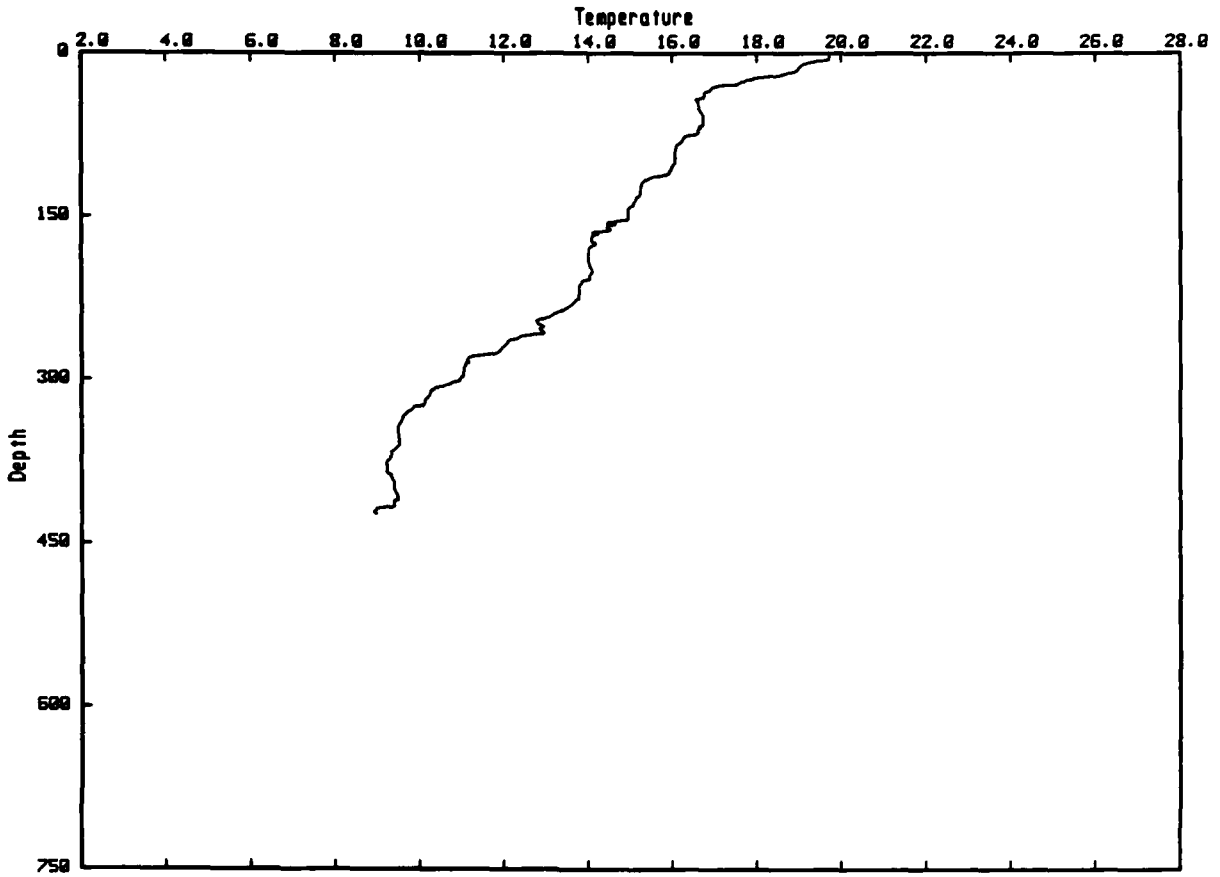
XBT DROP 139 28 37.8N 112 39.2W 24 NOV 84 1957 MST



XBT DROP 139 T-7 RADAR: none GULF COORDS: -25.0 242.0
JDAY 330 257Z DEPTH 498m/498m SST 16.24 2M TEMPS: SAIL 16.32 XBT 16.26
GULF OF CALIFORNIA: SILL REGION, UPCAST OF CTD STATION PC6114

Z	TEMP	Z	TEMP	Z	TEMP
10	16.3	200	14.6	390	13.8
20	16.1	211	14.5	400	13.3
31	15.9	220	14.5	410	13.1
40	15.8	230	14.4	420	12.9
50	15.4	240	14.4	430	12.3
60	15.4	250	14.4	440	12.2
70	14.6	260	14.4	450	11.7
80	14.7	270	14.4	460	10.8
90	14.5	280	14.4	470	10.8
100	14.5	290	14.4	480	10.0
110	14.5	300	14.4	490	9.7
120	14.6	310	14.4	498	9.3
130	14.8	320	14.4		
140	14.7	330	14.4		
150	14.8	340	14.4		
160	14.7	351	14.4		
170	14.7	360	14.3		
180	14.6	369	14.3		
190	14.5	380	14.2		

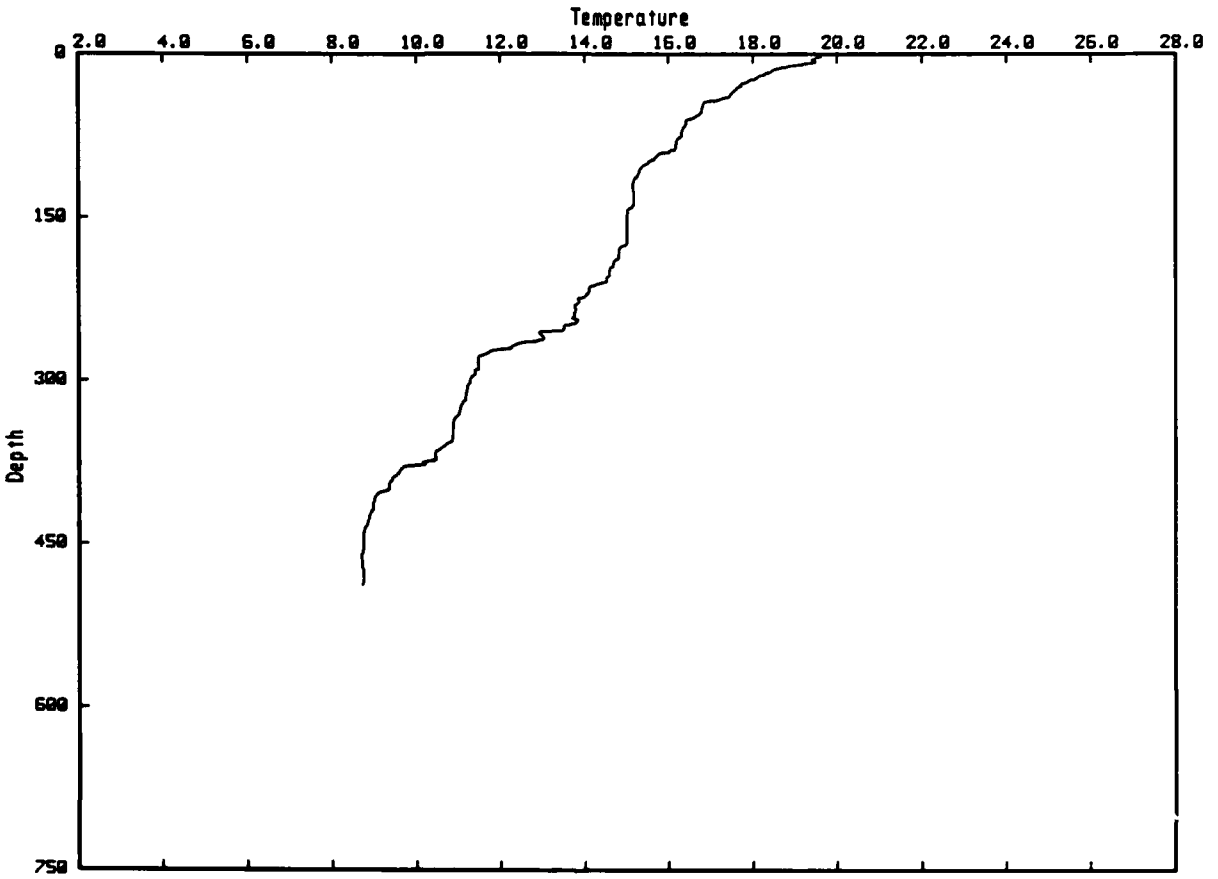
XBT DROP 140 28 35.7N 112 42.6W 25 NOV 84 0942 MST



XBT DROP 140 T-7 RADAR: SE 7.1nm 048T GULF COORDS: -31.8 242.2
JDAY 330 1642Z DEPTH 428m/423m SST 19.38 2M TEMPS: SAIL 19.65 XBT 19.72
GULF OF CALIFORNIA: BEGIN CAP SL/SE LINE, CXP1-21, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	19.1	200	14.1	390	9.3
20	18.6	210	13.9	400	9.4
30	17.1	220	13.8	410	9.5
40	16.7	230	13.6	420	9.0
50	16.6	240	13.2		
60	16.7	250	12.9		
70	16.6	260	12.5		
80	16.2	270	12.0		
90	16.1	280	11.2		
100	16.1	289	11.1		
110	15.9	300	10.9		
121	15.3	310	10.3		
130	15.2	320	10.1		
140	15.1	330	9.7		
150	14.9	340	9.5		
160	14.4	350	9.5		
170	14.1	360	9.5		
180	14.0	370	9.3		
190	14.0	379	9.2		

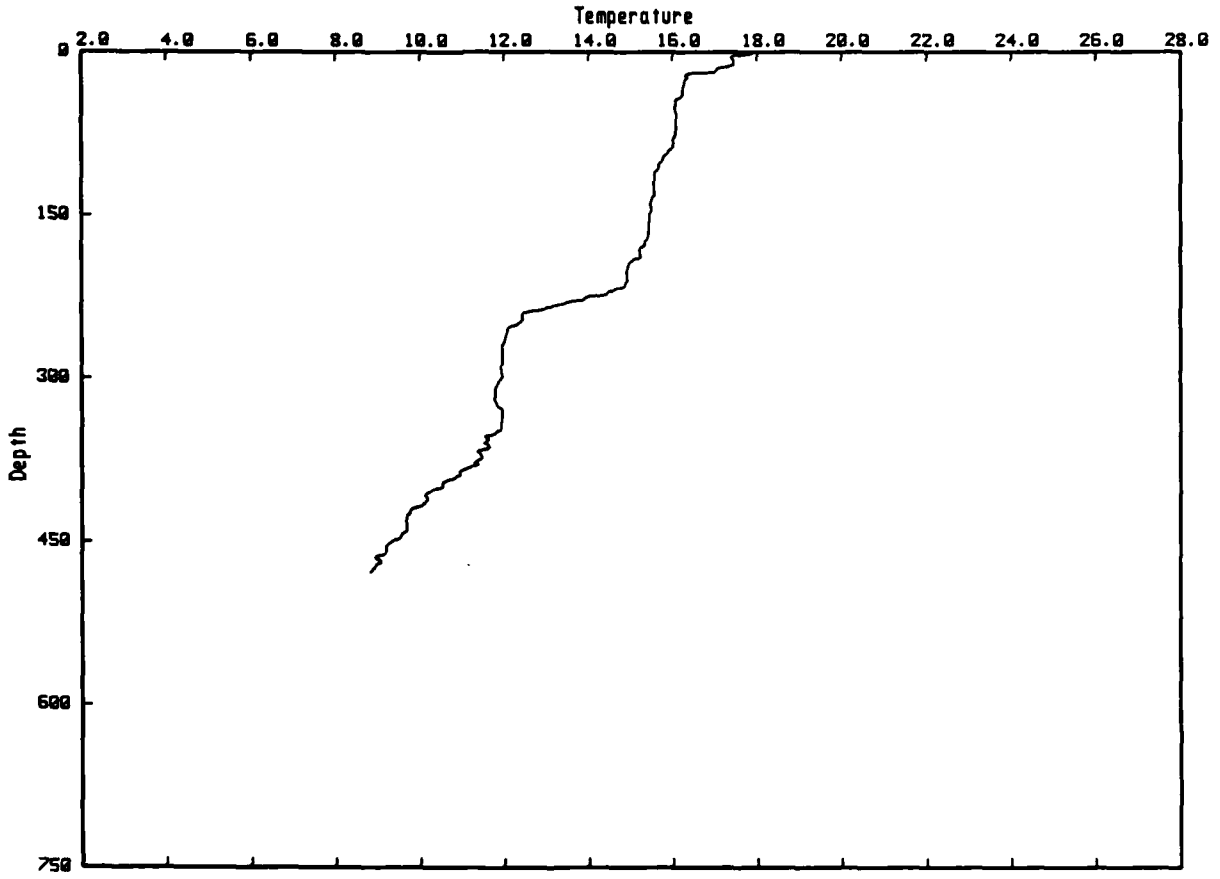
XBT DROP 141 28 36.1N 112 42.4W 25 NOV 84 0948 MST



XBT DROP 141 T-7 RADAR: SE 6.4nm 050T GULF COORDS: -31.1 242.6
JDAY 330 1648Z DEPTH 488m/488m SST 19.47 2M TEMPS: SAIL 19.61 XBT 19.50
GULF OF CALIFORNIA: CAP SL/SE SILL LINE, CXP1-22

Z	TEMP	Z	TEMP	Z	TEMP
10	19.1	200	14.6	390	9.4
20	18.2	210	14.4	400	9.3
30	17.7	220	14.1	410	9.0
40	17.3	230	13.8	420	8.9
50	16.8	240	13.8	430	8.9
60	16.4	250	13.5	440	8.7
70	16.3	260	13.0	450	8.8
80	16.2	270	12.2	460	8.7
90	16.0	280	11.5	470	8.7
100	15.5	290	11.4	480	8.8
110	15.3	299	11.3	488	8.7
120	15.2	310	11.2		
131	15.2	320	11.1		
140	15.1	330	11.0		
150	15.0	340	10.9		
160	15.0	350	10.9		
170	15.0	360	10.6		
181	14.8	370	10.4		
190	14.7	380	9.7		

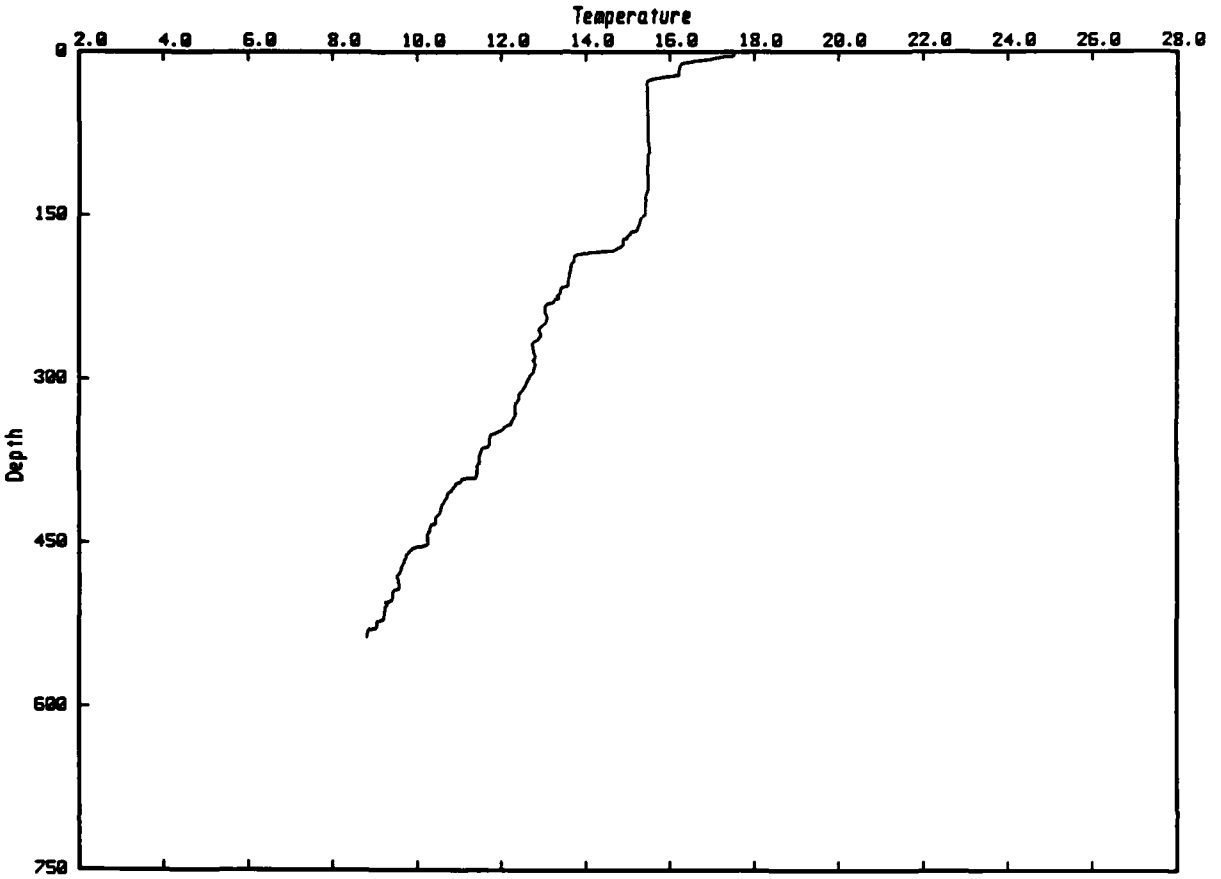
XBT DROP 142 28 36.5N 112 41.8W 25 NOV 84 0952 MST



XBT DROP 142 T-7 RADAR: SE 5.8nm 050T GULF COORDS: -29.9 242.6
JDAY 330 1652Z DEPTH 567m/477m SST 18.20 2M TEMPS: SAIL 18.69 XBT 17.45
GULF OF CALIFORNIA: CAP SL/SE SILL LINE, CXP1-23

Z	TEMP	Z	TEMP	Z	TEMP
10	17.4	200	14.9	390	10.9
20	16.4	210	14.9	400	10.5
30	16.3	220	14.5	411	10.2
40	16.2	230	13.5	420	9.8
50	16.1	240	12.5	431	9.7
60	16.1	251	12.3	440	9.7
70	16.1	261	12.0	450	9.3
80	16.0	270	12.0	460	9.2
90	15.9	279	11.9	470	9.0
101	15.7	289	11.9		
110	15.6	300	11.9		
120	15.6	311	11.8		
130	15.6	320	11.8		
140	15.5	331	12.0		
150	15.4	340	11.9		
159	15.4	350	11.8		
170	15.4	360	11.6		
180	15.2	369	11.4		
190	15.1	380	11.3		

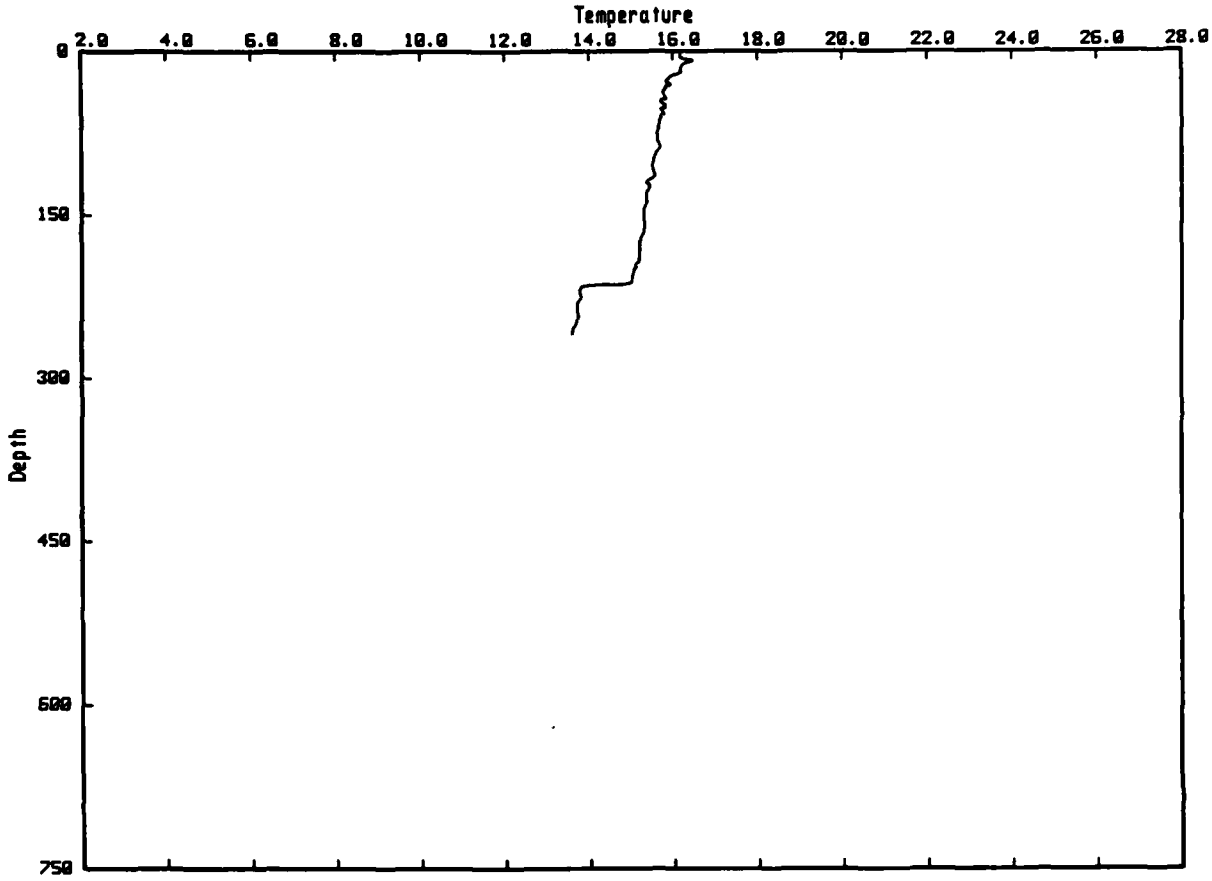
XBT DROP 143 28 37.1N 112 40.8W 25 NOV 84 0958 MST



XBT DROP 143 T-7 RADAR: SE 4.6nm 053T GULF COORDS: -27.9 242.5
JDAY 330 1658Z DEPTH 538m/538m SST 18.47 2M TEMPS: SAIL 18.15 XBT 17.51
GULF OF CALIFORNIA: CAP SL/SE SILL LINE, CXP1-24

Z	TEMP	Z	TEMP	Z	TEMP
10	16.4	200	13.6	390	11.4
20	16.2	210	13.6	400	10.8
29	15.4	220	13.4	410	10.7
41	15.5	230	13.2	420	10.6
50	15.5	240	13.1	430	10.4
60	15.5	250	13.0	440	10.3
71	15.5	260	12.9	450	10.3
80	15.5	270	12.7	460	9.8
90	15.5	280	12.8	470	9.7
99	15.5	290	12.8	480	9.5
110	15.4	300	12.6	490	9.6
120	15.5	310	12.5	500	9.4
129	15.4	320	12.4	509	9.2
139	15.4	329	12.3	520	9.2
150	15.4	340	12.2	530	8.9
160	15.2	350	11.8	537	8.8
170	15.0	361	11.7		
180	14.7	371	11.5		
190	13.7	380	11.4		

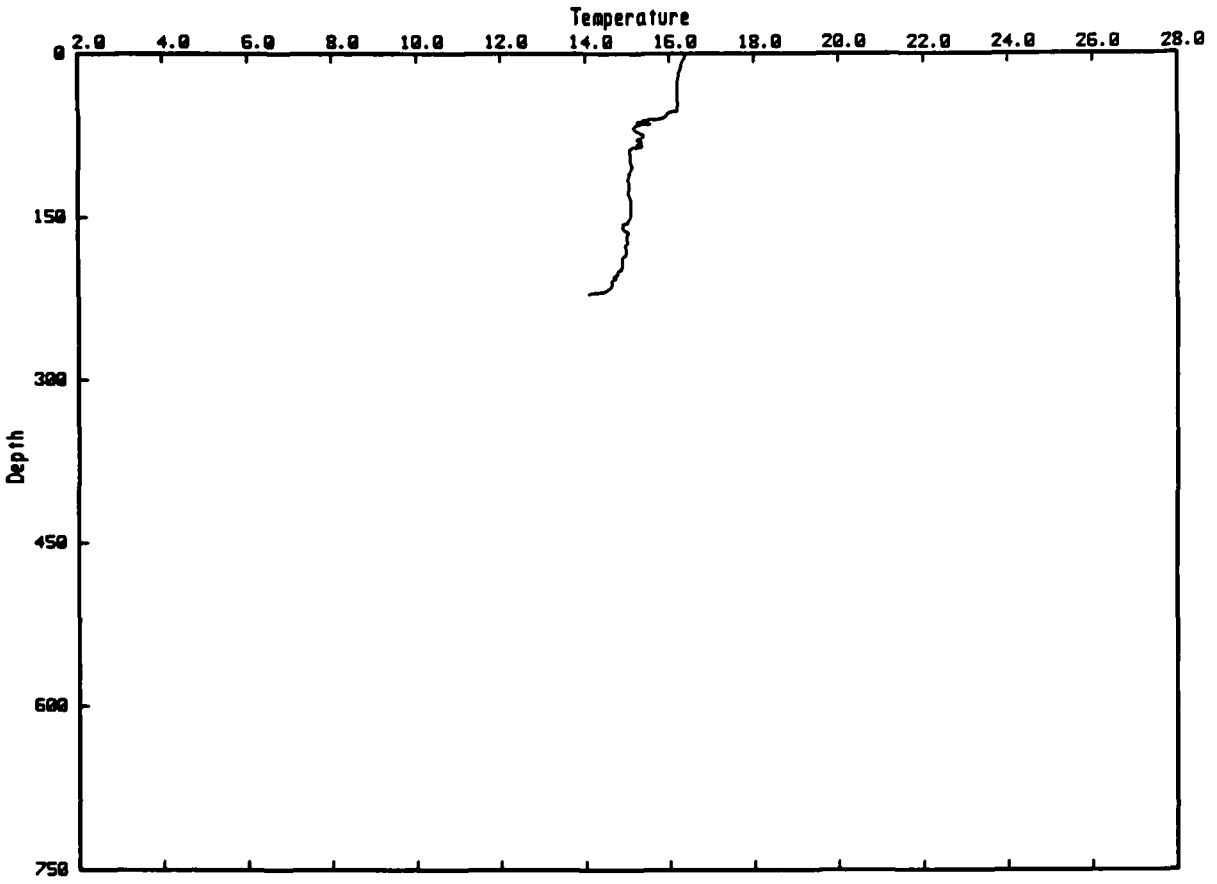
XBT DROP 144 28 37.3N 112 40.3W 25 NOV 84 1002 MST



XBT DROP 144 T-7 RADAR: SE 4.3nm 054T GULF COORDS: -27.0 242.4
JDAY 330 1702Z DEPTH 481m/259m SST 17.60 2M TEMPS: SAIL 16.34 XBT 16.19
GULF OF CALIFORNIA: CAP SL/SE SILL LINE, CXP1-25

Z	TEMP	Z	TEMP
10	16.4	200	15.1
20	16.1	210	15.0
30	15.9	220	13.8
40	15.8	230	13.7
50	15.8	239	13.7
60	15.7	251	13.7
70	15.6		
80	15.6		
90	15.6		
100	15.5		
110	15.5		
120	15.4		
130	15.4		
140	15.4		
151	15.3		
161	15.3		
170	15.3		
180	15.2		
190	15.2		

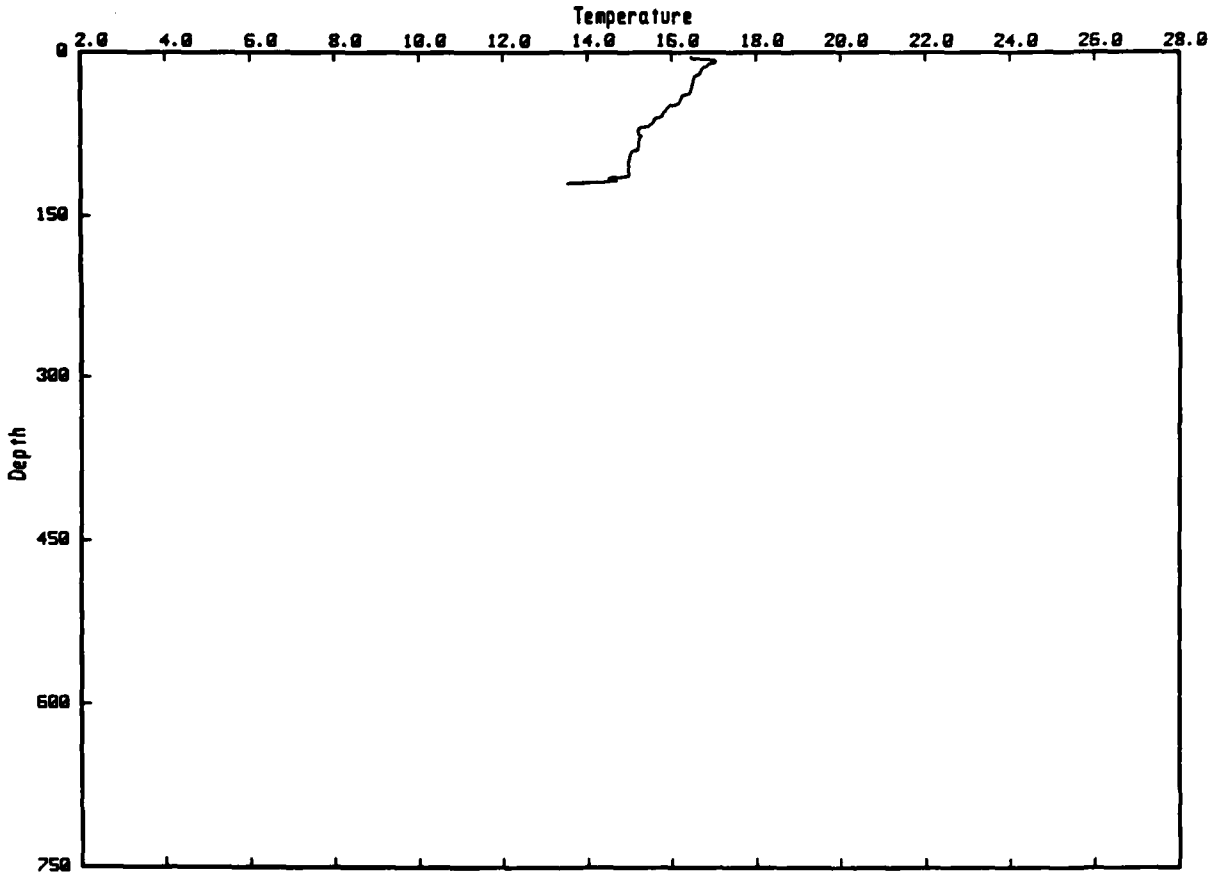
XBT DROP 145 28 37.8N 112 39.3W 25 NOV 84 1008 MST



XBT DROP 145 T-7 RADAR: SE 3.3nm 057T GULF COORDS: -25.1 242.1
JDAY 330 1708Z DEPTH 221m/221m SST 16.58 2M TEMPS: SAIL 16.19 XBT 16.37
GULF OF CALIFORNIA: CAP SL/SE SILL LINE, CXP1-26

Z	TEMP	Z	TEMP
10	16.3	200	14.8
20	16.2	210	14.6
30	16.2	220	14.1
40	16.2		
51	16.2		
60	15.7		
70	15.2		
80	15.3		
89	15.0		
100	15.1		
110	15.1		
121	15.1		
130	15.0		
140	15.1		
150	15.1		
160	14.9		
170	15.0		
179	15.0		
191	14.9		

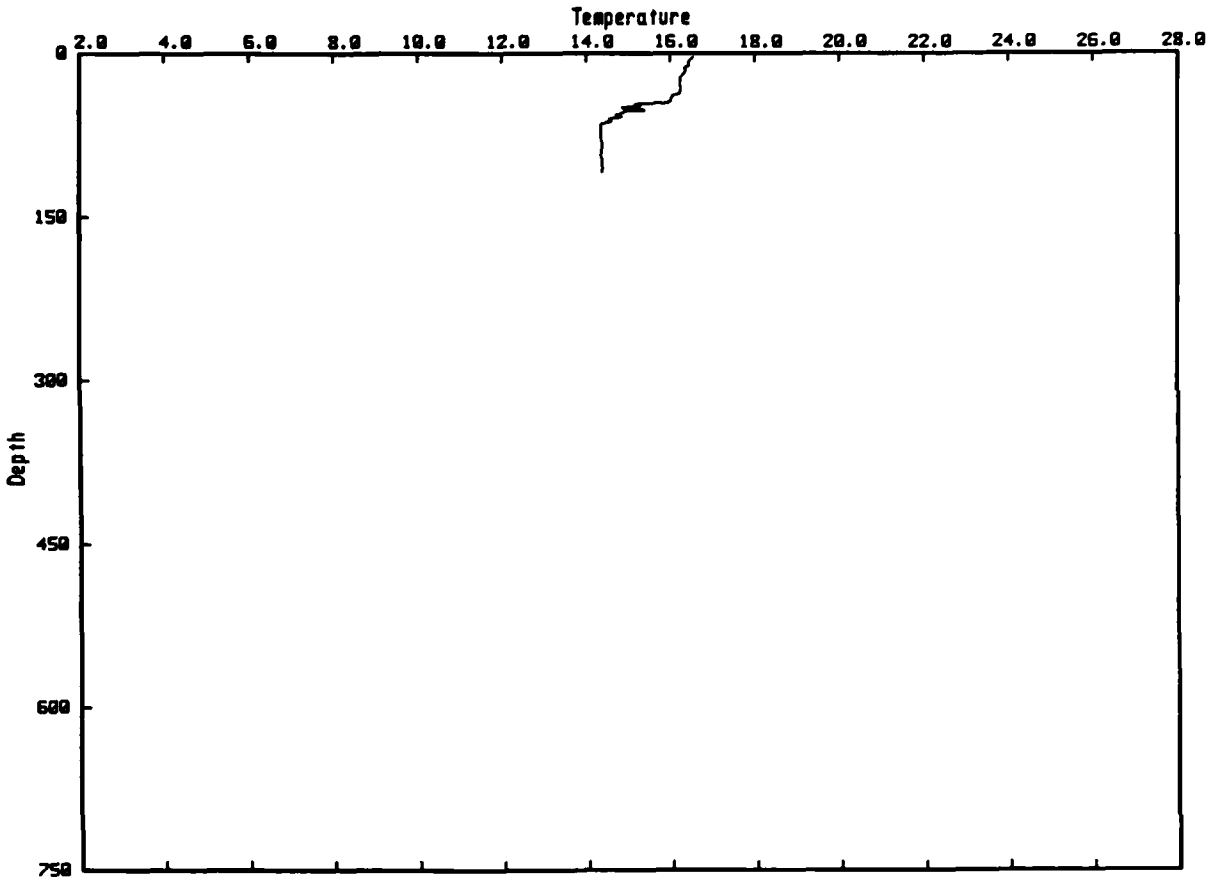
XBT DROP 146 28 38.0N 112 38.2W 25 NOV 84 1014 MST



XBT DROP 146 T-7 RADAR: SE 2.5nm 059T GULF COORDS: -23.5 241.4
JDAY 330 1714Z DEPTH 120m/120m SST 16.50 2M TEMPS: SAIL 16.52 XBT .00
GULF OF CALIFORNIA: CAP SL/SE SILL LINE, CXP1-27

Z	TEMP
10	17.0
20	16.7
29	16.5
40	16.2
50	15.9
60	15.6
70	15.2
80	15.2
90	15.1
100	15.0
110	15.0
120	13.5

XBT DROP 147 28 38.1N 112 37.8W 25 NOV 84 1017 MST



XBT DROP 147 T-7 RADAR: SE 2.1nm 061T GULF COORDS: -22.8 241.1
JDAY 330 1717Z DEPTH 111m/111m SST 16.50 2M TEMPS: SAIL 16.54 XBT 16.53
GULF OF CALIFORNIA: END CAP SL/SE SILL LINE, CXP1-28, SPRING TIDE

Z	TEMP
10	16.4
20	16.3
29	16.2
40	16.1
50	14.9
60	14.6
70	14.4
81	14.4
90	14.4
101	14.4
109	14.4

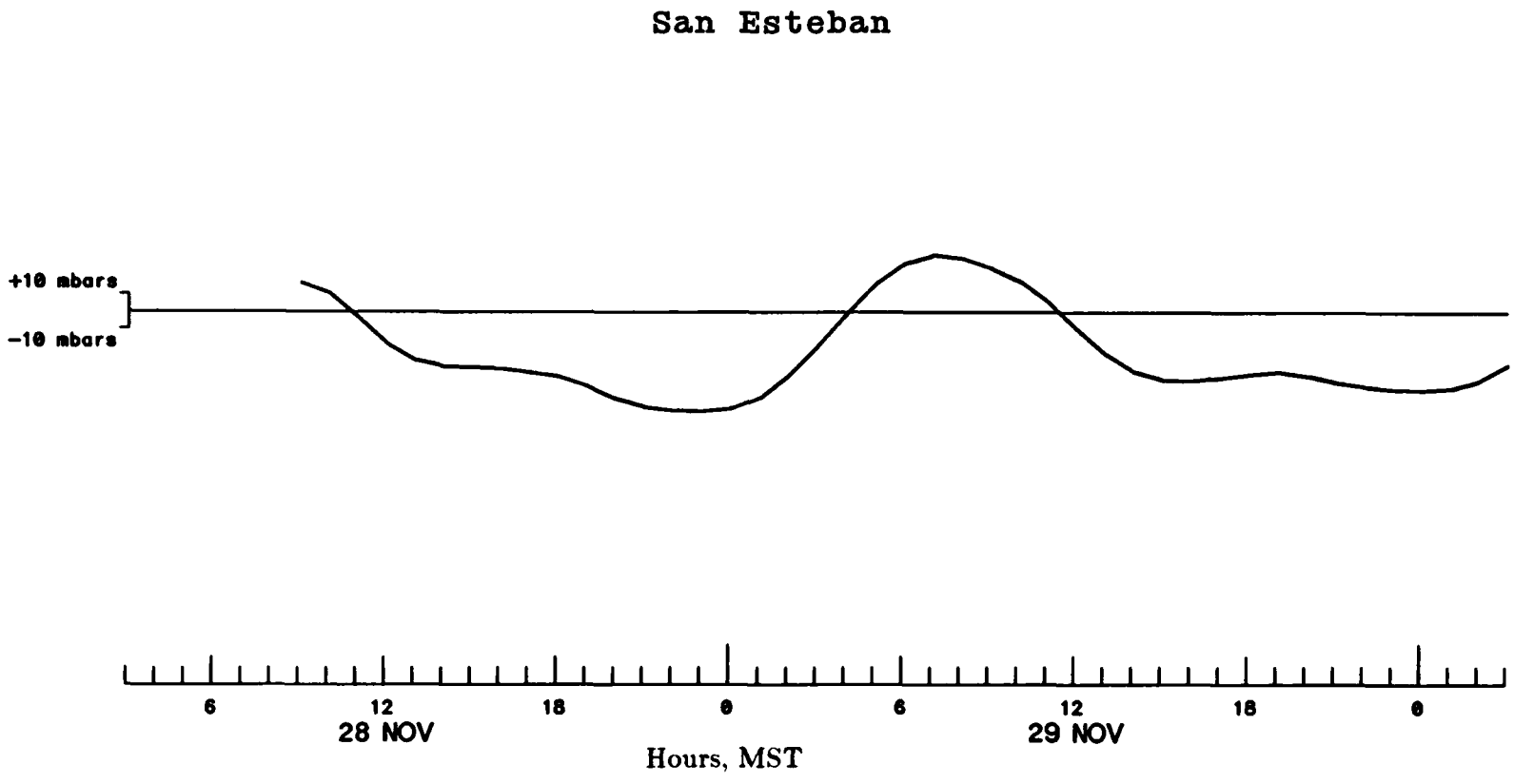


Figure 20. Bottom Pressure at San Esteban Island.
28-29 November 1984 - Neap Tides.

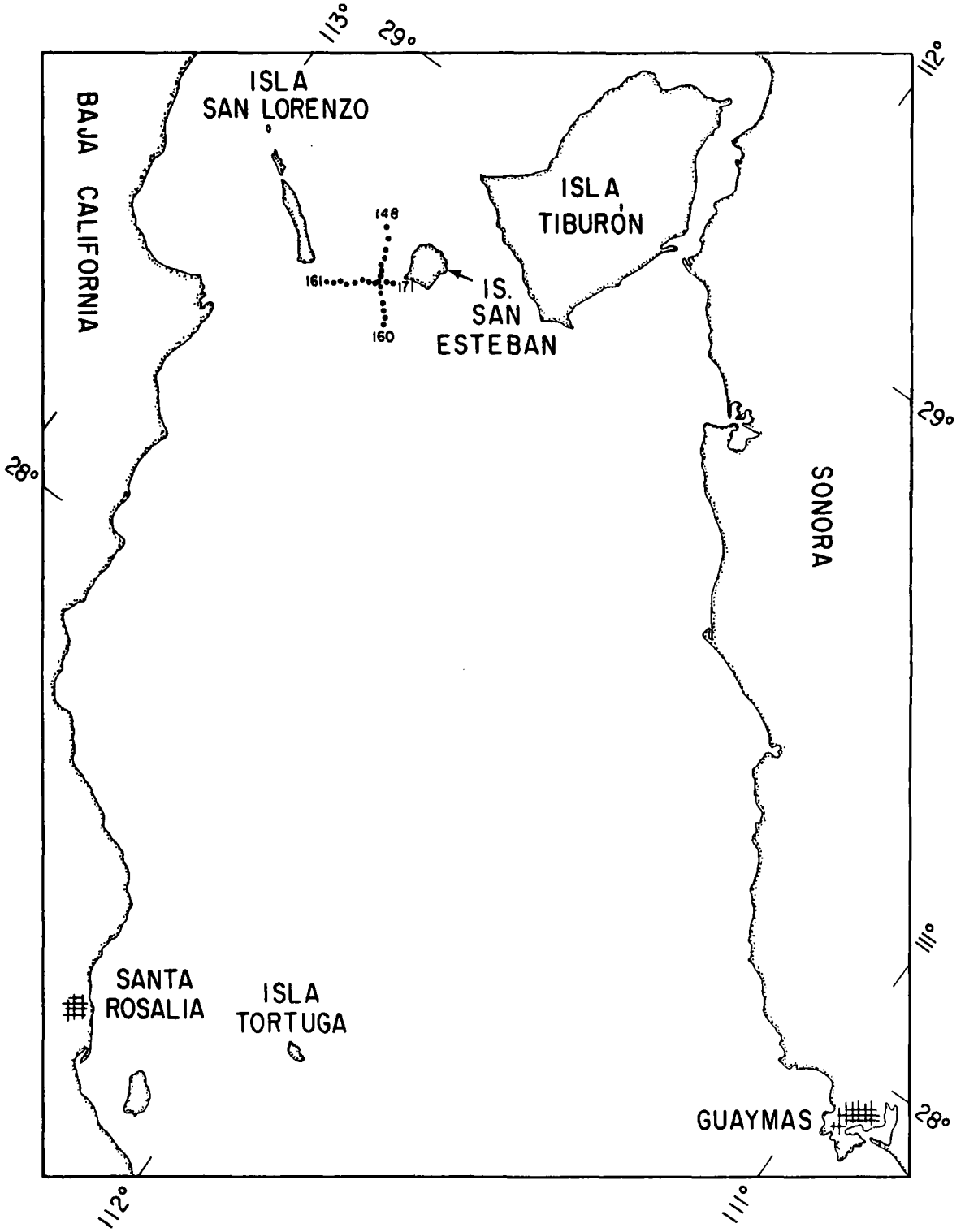
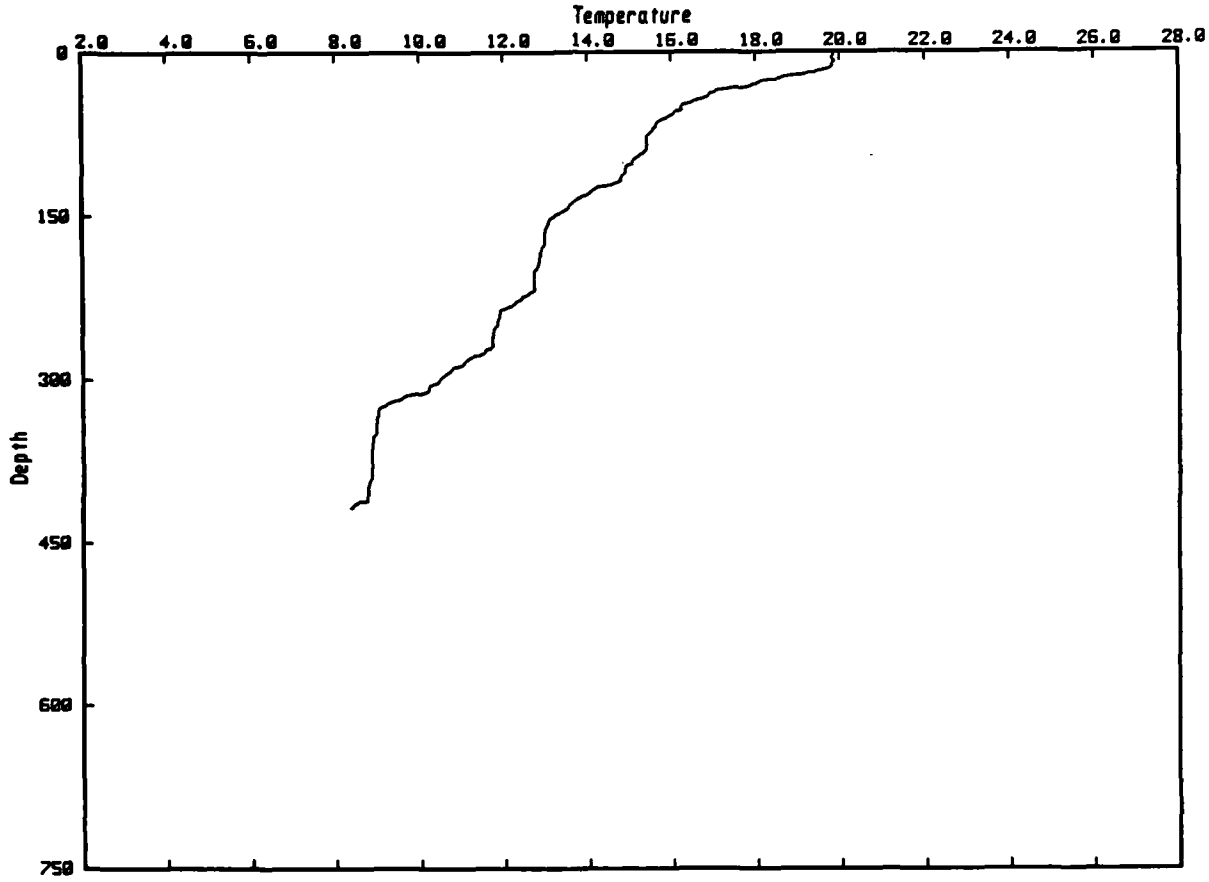


Figure 21. CAP2 Section: XBT Station Locations

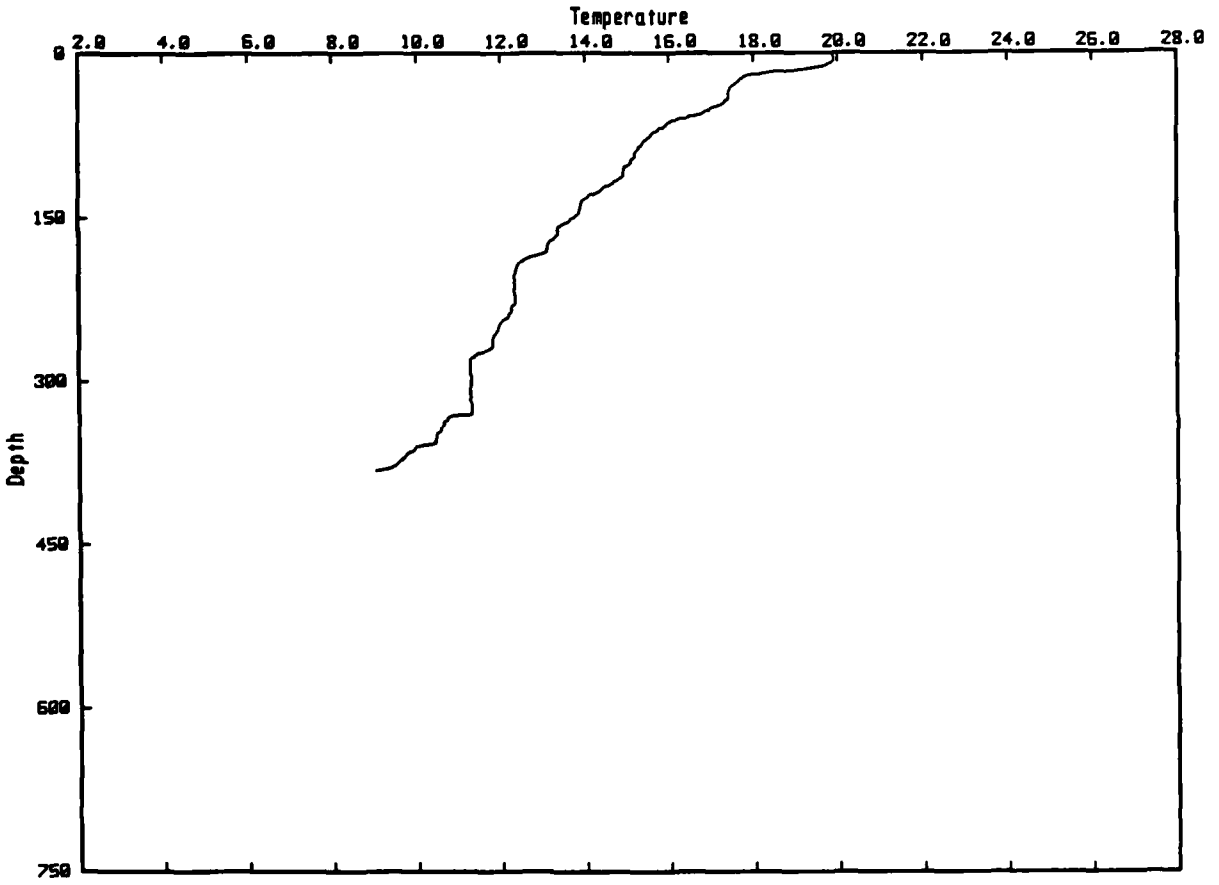
XBT DROP 148 28 43.1N 112 41.1W 28 NOV 84 1335 MST



XBT DROP 148 T-7 RADAR: SE 5.5nm 126T GULF COORDS: -21.7 251.8
JDAY 333 2035Z DEPTH 419m/417m SST 19.75 2M TEMPS: SAIL 19.98 XBT 19.84
GULF OF CALIFORNIA: BEGIN CAP N/S SILL LINE, CXP2-1, NEAP TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	19.8	200	12.7	390	8.8
20	19.2	210	12.7	399	8.7
30	17.9	220	12.6	410	8.7
40	16.9	230	12.2		
50	16.2	240	11.9		
60	15.9	250	11.8		
70	15.6	260	11.7		
81	15.4	270	11.7		
90	15.4	280	11.2		
101	15.1	290	10.8		
110	14.9	300	10.5		
120	14.7	310	10.2		
130	14.0	320	9.4		
140	13.6	330	9.0		
150	13.2	340	9.0		
160	13.0	350	8.9		
170	13.0	361	8.9		
180	12.9	369	8.9		
190	12.8	381	8.8		

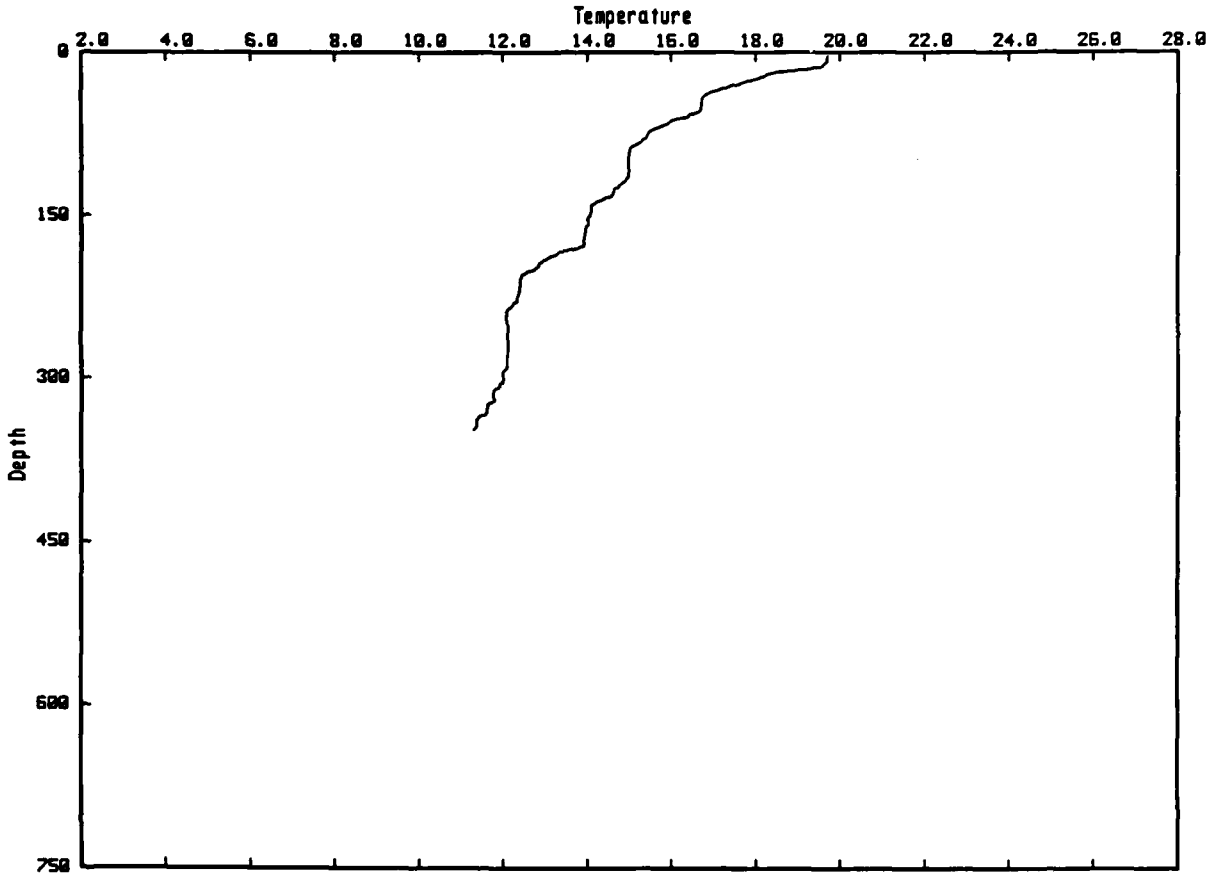
XBT DROP 149 28 42.2N 112 40.2W 28 NOV 84 1341 MST



XBT DROP 149 T-7 RADAR: SE 4.5nm 122T GULF COORDS: -21.5 249.6
JDAY 333 2041Z DEPTH 382m/382m SST 19.70 2M TEMPS: SAIL 19.99 XBT 19.90
GULF OF CALIFORNIA: SILL LINE, CXP2-2

Z	TEMP	Z	TEMP
10	19.8	200	12.3
20	17.9	211	12.3
30	17.5	219	12.3
40	17.4	230	12.3
50	17.0	240	12.2
60	16.2	251	11.9
70	15.7	260	11.8
80	15.4	270	11.7
90	15.2	279	11.3
100	15.1	289	11.3
110	14.9	299	11.3
120	14.6	311	11.3
130	14.1	320	11.3
140	13.9	330	11.3
150	13.7	340	10.6
160	13.4	350	10.5
170	13.2	360	10.0
180	13.1	370	9.7
190	12.5	380	9.3

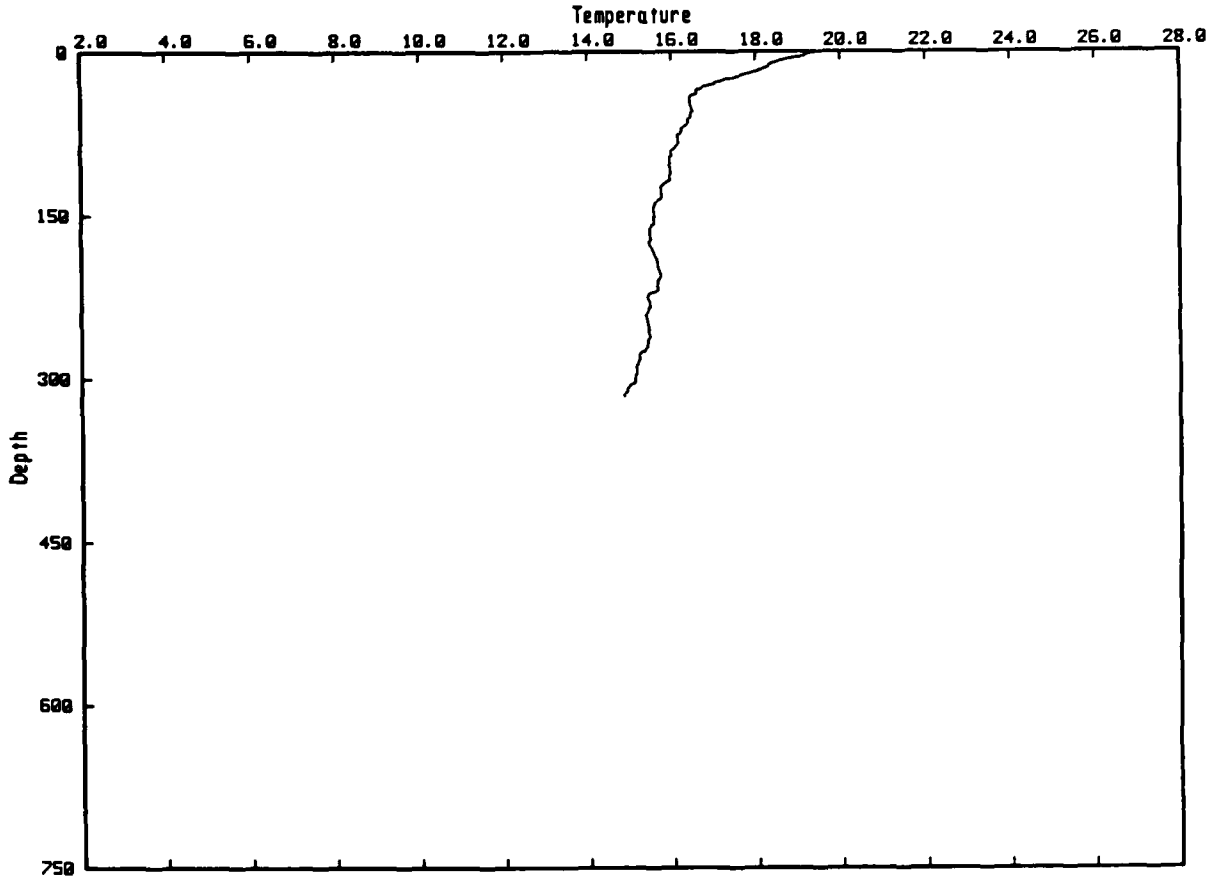
XBT DROP 150 28 41.0N 112 39.6W 28 NOV 84 1347 MST



XBT DROP 150 T-7 RADAR: SE 3.5nm 111T GULF COORDS: -22.0 247.2
JDAY 333 2047Z DEPTH 348m/348m SST 19.70 2M TEMPS: SAIL 19.90 XBT 19.71
GULF OF CALIFORNIA: SILL LINE, CXP2-3

Z	TEMP	Z	TEMP
10	19.7	200	12.8
20	18.3	210	12.4
30	17.5	220	12.4
40	16.8	230	12.3
50	16.7	240	12.1
60	16.3	250	12.1
70	15.6	260	12.1
80	15.3	270	12.1
90	15.0	280	12.1
99	15.0	290	12.1
111	15.0	300	12.0
120	14.8	310	11.8
130	14.6	320	11.8
140	14.1	330	11.6
150	14.1	340	11.4
159	14.0	348	11.3
170	13.9		
180	13.8		
190	13.0		

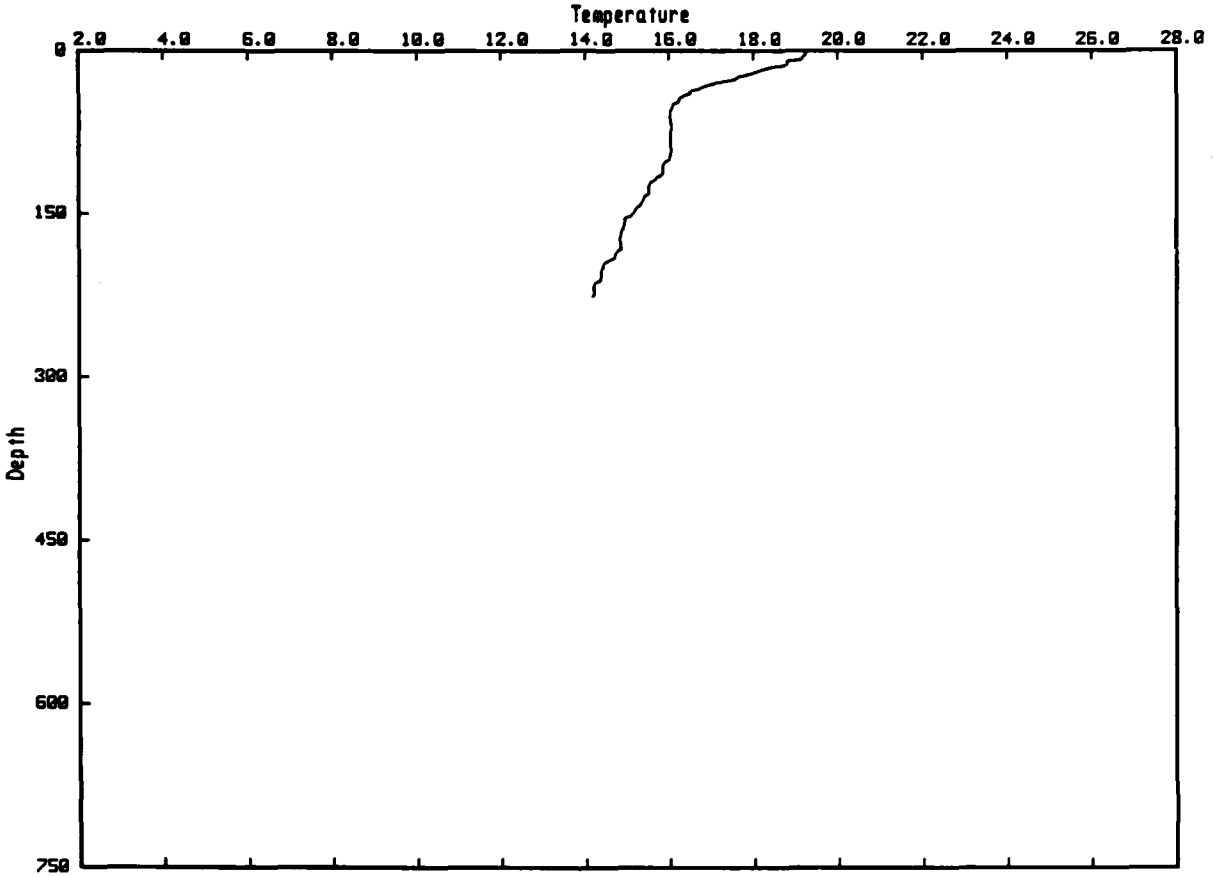
XBT DROP 151 28 40.3N 112 39.2W 28 NOV 84 1351 MST



XBT DROP 151 T-7 RADAR: SE 3.0nm 102T GULF COORDS: -22.2 245.8
JDAY 333 2051Z DEPTH 317m/317m SST 19.40 2M TEMPS: SAIL 19.75 XBT 19.16
GULF OF CALIFORNIA: SILL LINE, CXP2-4 (CROSSED VISIBLE FRONT)

Z	TEMP	Z	TEMP
10	18.4	199	15.7
20	17.8	210	15.7
30	17.0	220	15.6
40	16.5	231	15.5
50	16.4	240	15.4
61	16.4	250	15.4
70	16.2	260	15.5
79	16.1	270	15.4
90	16.0	280	15.2
100	15.9	290	15.1
110	16.0	301	15.1
120	15.9	310	14.9
131	15.7		
140	15.6		
150	15.6		
160	15.5		
170	15.5		
180	15.5		
190	15.6		

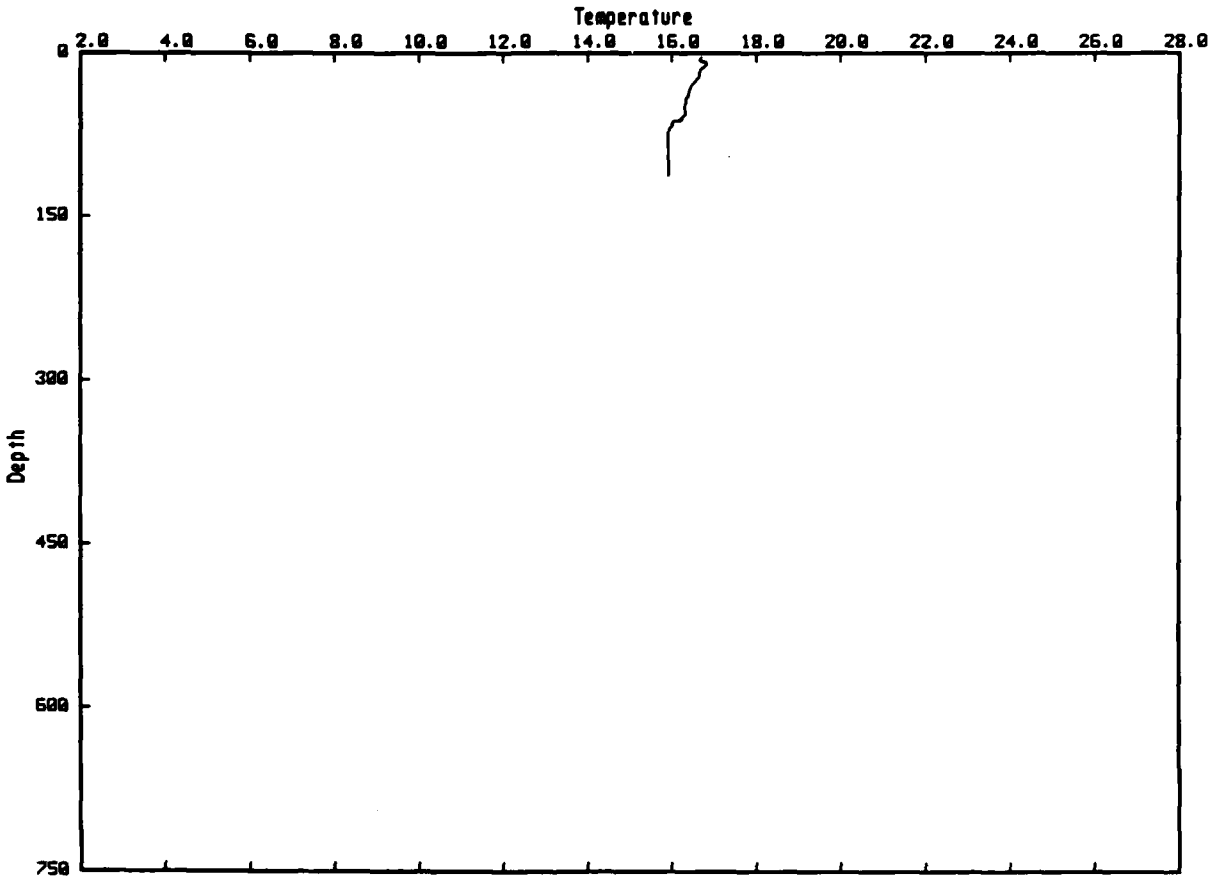
XBT DROP 152 28 39.5N 112 39.0W 28 NOV 84 1355 MST



XBT DROP 152 T-7 RADAR: SE 2.6nm 090T GULF COORDS: -22.9 244.4
JDAY 333 2055Z DEPTH 227m/225m SST 19.14 2M TEMPS: SAIL 19.46 XBT 19.24
GULF OF CALIFORNIA: SILL LINE, CXP2-5

Z	TEMP	Z	TEMP
10	18.8	200	14.4
20	18.0	210	14.4
30	17.1	220	14.2
40	16.5		
50	16.1		
59	16.0		
70	16.1		
81	16.0		
90	16.1		
100	16.0		
110	15.9		
120	15.6		
130	15.5		
140	15.3		
150	15.1		
161	14.9		
170	14.9		
180	14.9		
190	14.7		

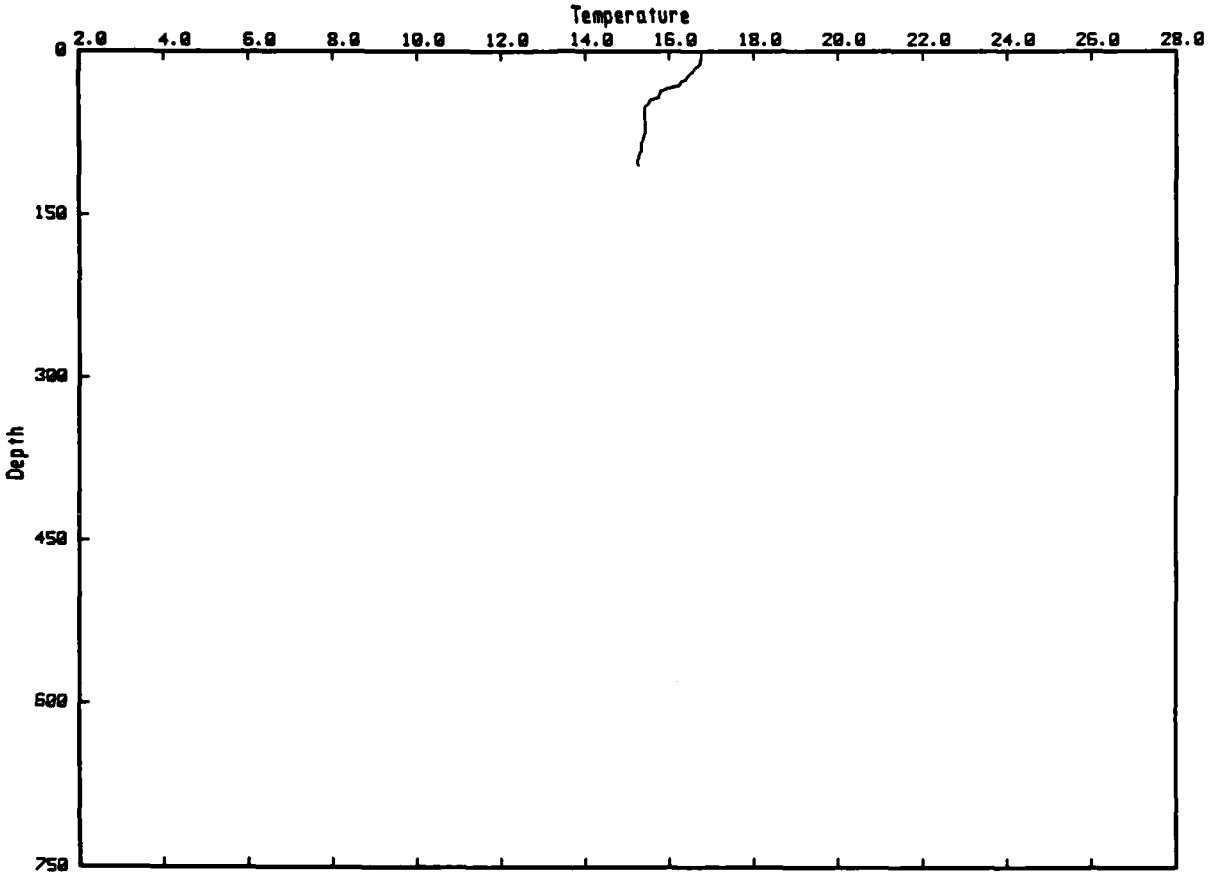
XBT DROP 153 28 39.0N 112 38.6W 28 NOV 84 1359 MST



XBT DROP 153 T-7 RADAR: SE 2.3nm 072T GULF COORDS: -22.9 243.3
JDAY 333 2059Z DEPTH 115m/113m SST 17.07 2M TEMPS: SAIL 18.75 XBT 16.71
GULF OF CALIFORNIA: SILL LINE, CXP2-6

Z	TEMP
10	16.8
20	16.7
30	16.5
40	16.4
50	16.3
60	16.2
70	15.9
80	15.9
90	15.9
100	15.9
110	15.9

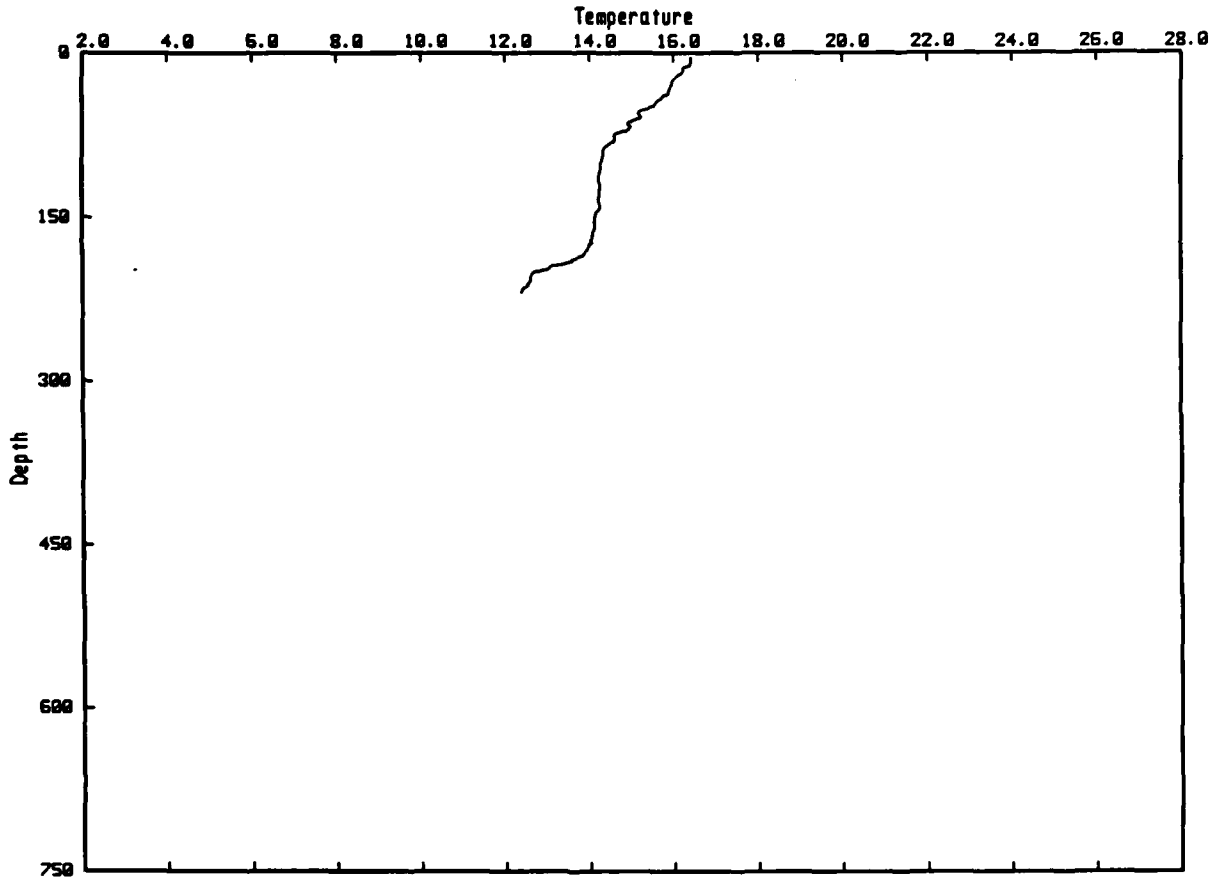
XBT DROP 154 28 38.4N 112 38.3W 28 NOV 84 1403 MST



XBT DROP 154 T-7 RADAR: SE 2.3nm 060T GULF COORDS: -23.1 242.1
JDAY 333 2103Z DEPTH 111m/104m SST 16.86 2M TEMPS: SAIL 16.88 XBT 16.76
GULF OF CALIFORNIA: SILL LINE, CXP2-7 (IN SURFACE CHOP)

Z	TEMP
11	16.7
20	16.5
30	16.3
40	15.8
51	15.4
60	15.4
70	15.4
80	15.4
91	15.3
100	15.2

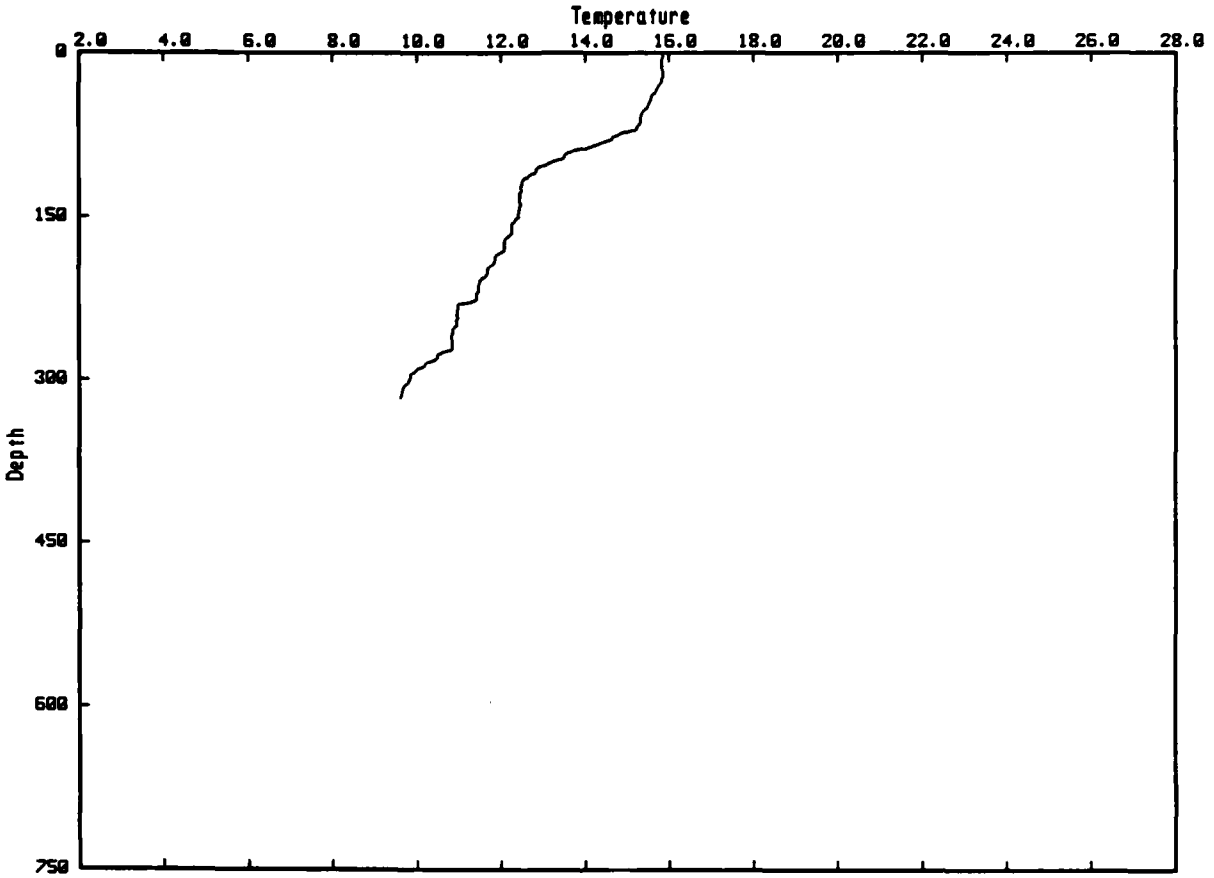
XBT DROP 155 28 37.5N 112 37.6W 28 NOV 84 1408 MST



XBT DROP 155 T-7 RADAR: SE 2.6nm 039T GULF COORDS: -23.2 240.1
JDAY 333 2108Z DEPTH 219m/218m SST 16.46 2M TEMPS: SAIL 16.84 XBT .00
GULF OF CALIFORNIA: SILL LINE, CXP2-8

Z	TEMP	Z	TEMP
10	16.4	200	12.7
20	16.1	210	12.6
30	16.0	218	12.4
40	15.8		
50	15.5		
60	15.1		
70	14.9		
80	14.6		
90	14.3		
100	14.3		
111	14.2		
119	14.3		
130	14.2		
139	14.3		
150	14.1		
160	14.1		
171	14.1		
180	14.0		
190	13.6		

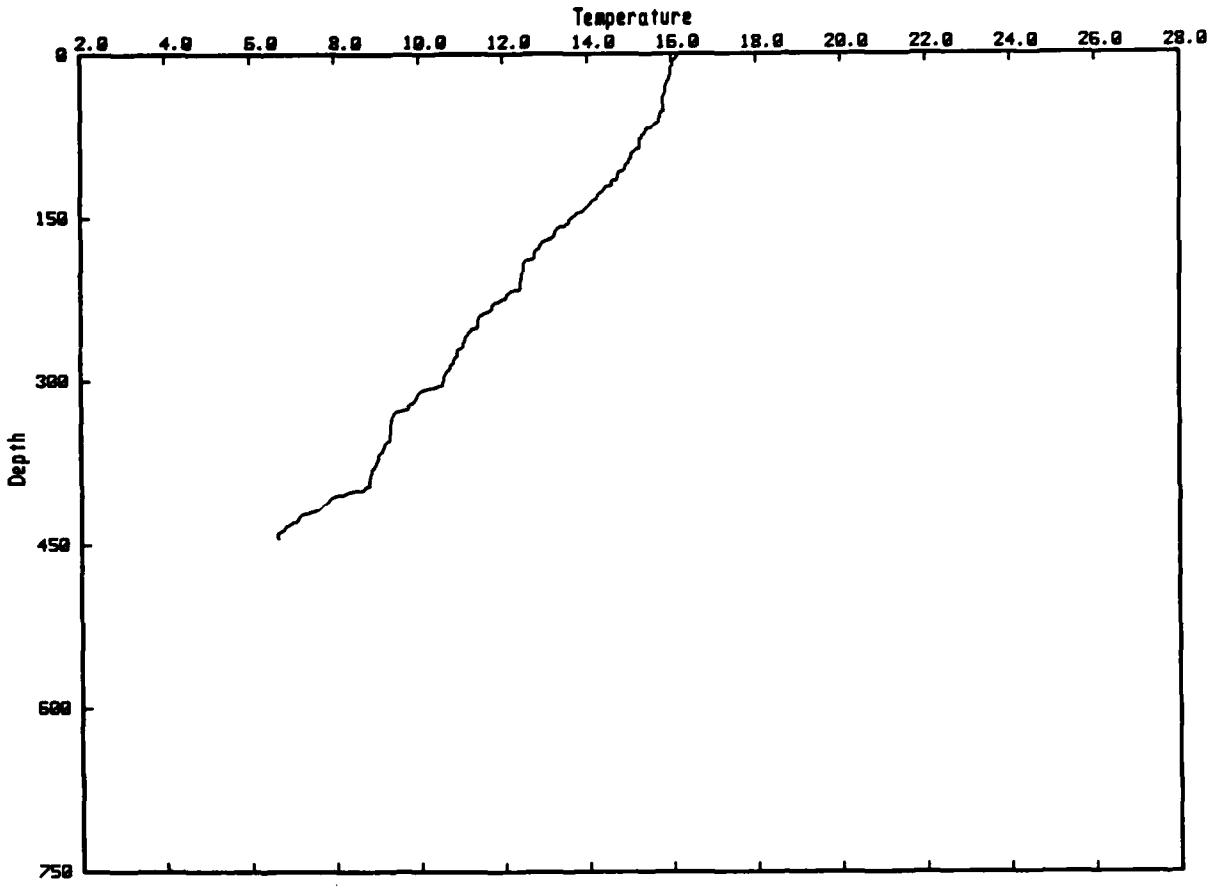
XBT DROP 156 28 37.0N 112 37.2W 28 NOV 84 1413 MST



XBT DROP 156 T-7 RADAR: SE 2.8nm 025T GULF COORDS: -23.2 238.9
JDAY 333 2113Z DEPTH 319m/317m SST 15.84 2M TEMPS: SAIL 16.03 XBT 15.85
GULF OF CALIFORNIA: SILL LINE, CXP2-9

Z	TEMP	Z	TEMP
11	15.8	200	11.7
21	15.9	210	11.5
30	15.8	220	11.4
40	15.6	230	11.1
50	15.5	240	11.0
60	15.3	250	11.0
70	15.2	261	10.8
80	14.6	271	10.8
90	13.7	280	10.5
100	13.2	290	10.0
110	12.8	300	9.8
120	12.5	310	9.7
130	12.5		
140	12.5		
150	12.4		
160	12.3		
170	12.1		
180	12.1		
190	11.9		

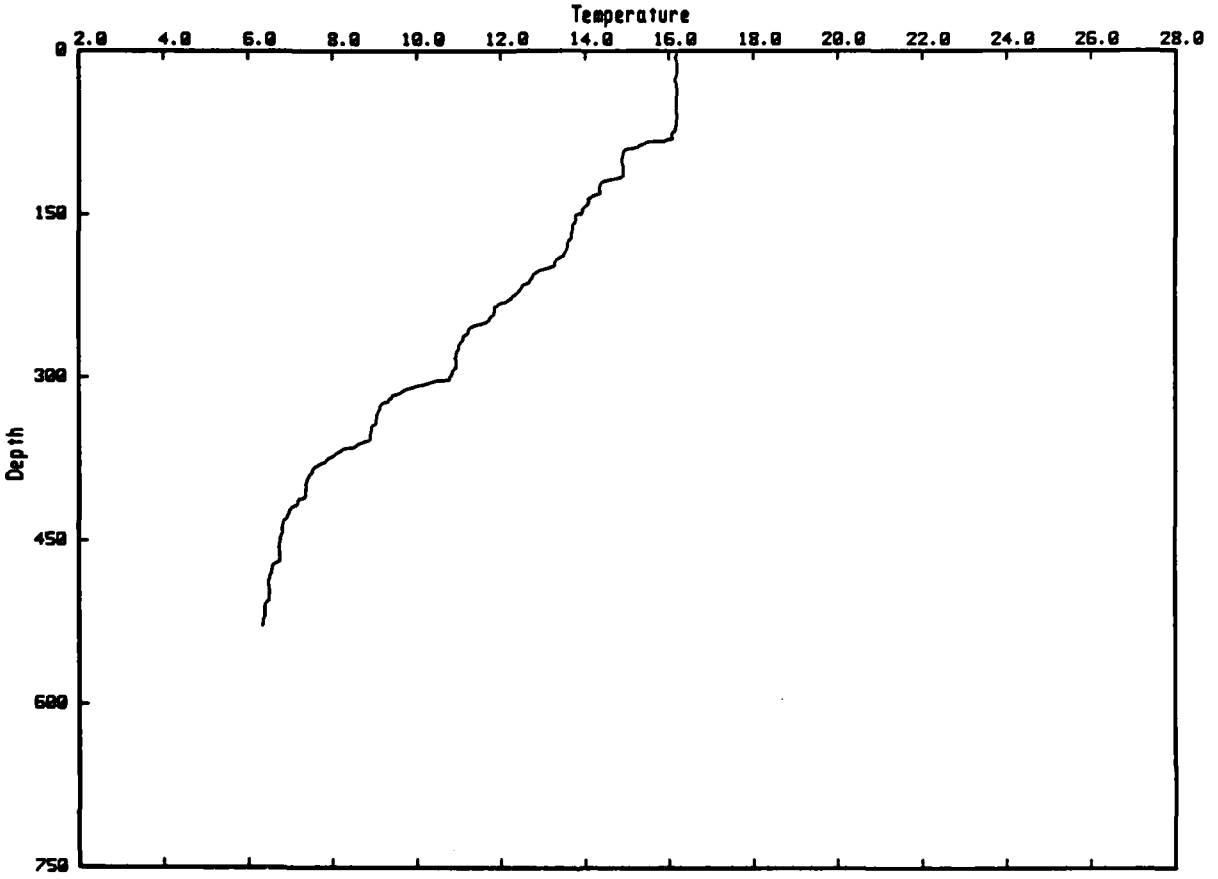
XBT DROP 157 28 36.2N 112 36.2W 28 NOV 84 1418 MST



XBT DROP 157 T-7 RADAR: SE 3.3nm 008T GULF COORDS: -22.8 236.8
JDAY 333 2118Z DEPTH 444m/443m SST 16.03 2M TEMPS: SAIL 16.18 XBT 16.13
GULF OF CALIFORNIA: SILL LINE, CXP2-10

Z	TEMP	Z	TEMP	Z	TEMP
10	16.0	200	12.4	389	8.8
20	16.0	210	12.4	400	8.6
30	15.9	220	12.1	410	7.9
40	15.8	230	11.7	420	7.4
50	15.8	240	11.4	430	7.0
60	15.7	250	11.4	440	6.6
70	15.4	260	11.1		
80	15.2	270	11.0		
90	15.1	280	10.8		
100	15.0	290	10.7		
110	14.7	300	10.6		
120	14.6	310	10.0		
130	14.2	320	9.9		
140	14.0	330	9.4		
150	13.6	341	9.3		
160	13.3	350	9.3		
170	13.1	360	9.2		
180	12.8	370	9.0		
190	12.5	380	8.9		

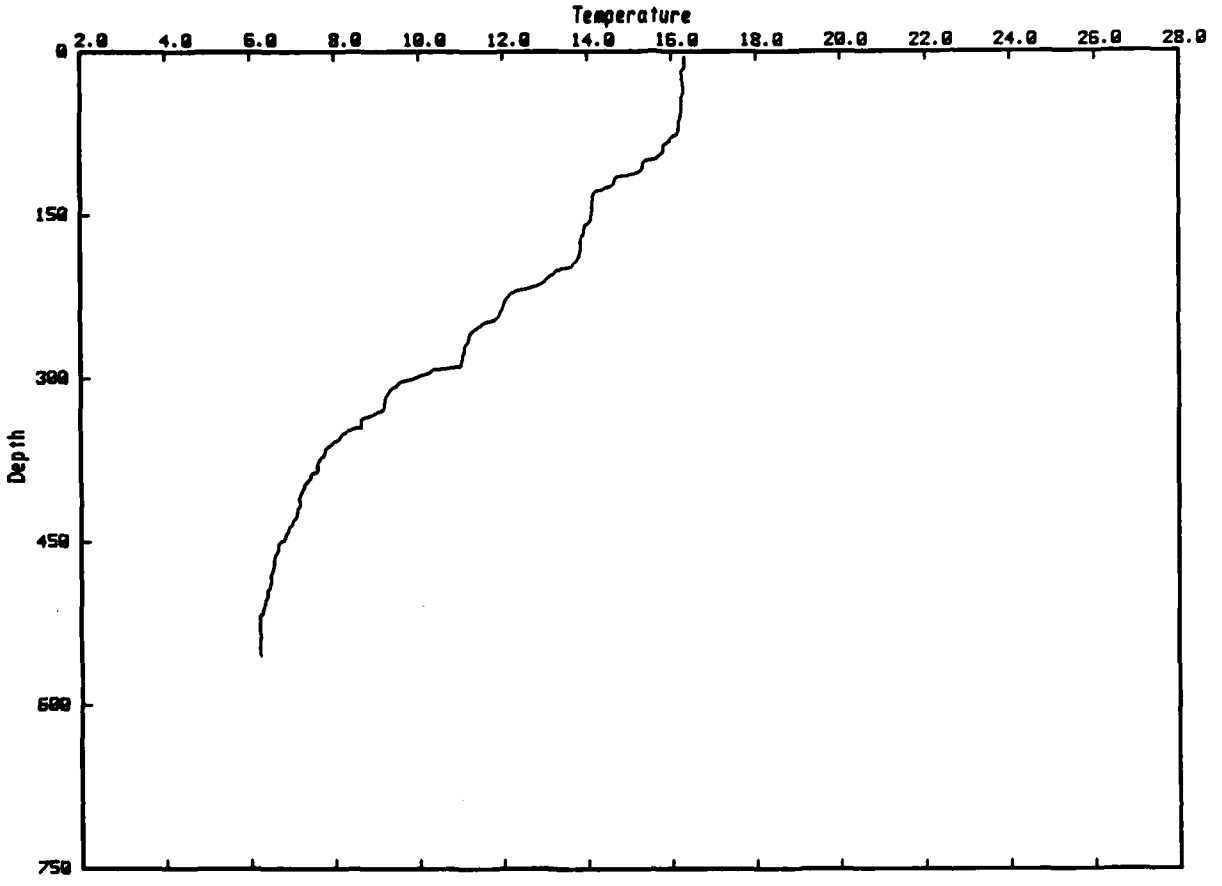
XBT DROP 158 28 35.6N 112 35.6W 28 NOV 84 1423 MST



XBT DROP 158 T-7 RADAR: SE 3.9nm 357T GULF COORDS: -22.6 235.3
JDAY 333 2123Z DEPTH 539m/528m SST 16.24 2M TEMPS: SAIL 16.32 XBT 16.17
GULF OF CALIFORNIA: SILL LINE, CXP2-11

Z	TEMP	Z	TEMP	Z	TEMP
10	16.2	200	13.1	390	7.5
19	16.2	210	12.7	399	7.4
30	16.2	220	12.4	410	7.4
39	16.2	230	12.2	421	7.0
50	16.2	240	11.9	430	6.9
60	16.2	250	11.7	440	6.8
70	16.2	260	11.2	451	6.8
80	16.1	270	11.0	460	6.8
90	15.0	279	10.9	470	6.7
100	14.9	290	10.9	480	6.6
109	14.9	300	10.8	490	6.5
120	14.4	310	9.9	501	6.5
130	14.4	320	9.4	510	6.4
140	14.1	330	9.1	520	6.4
150	13.9	340	9.1		
160	13.7	351	8.9		
171	13.7	360	8.7		
180	13.6	370	8.1		
190	13.4	380	7.7		

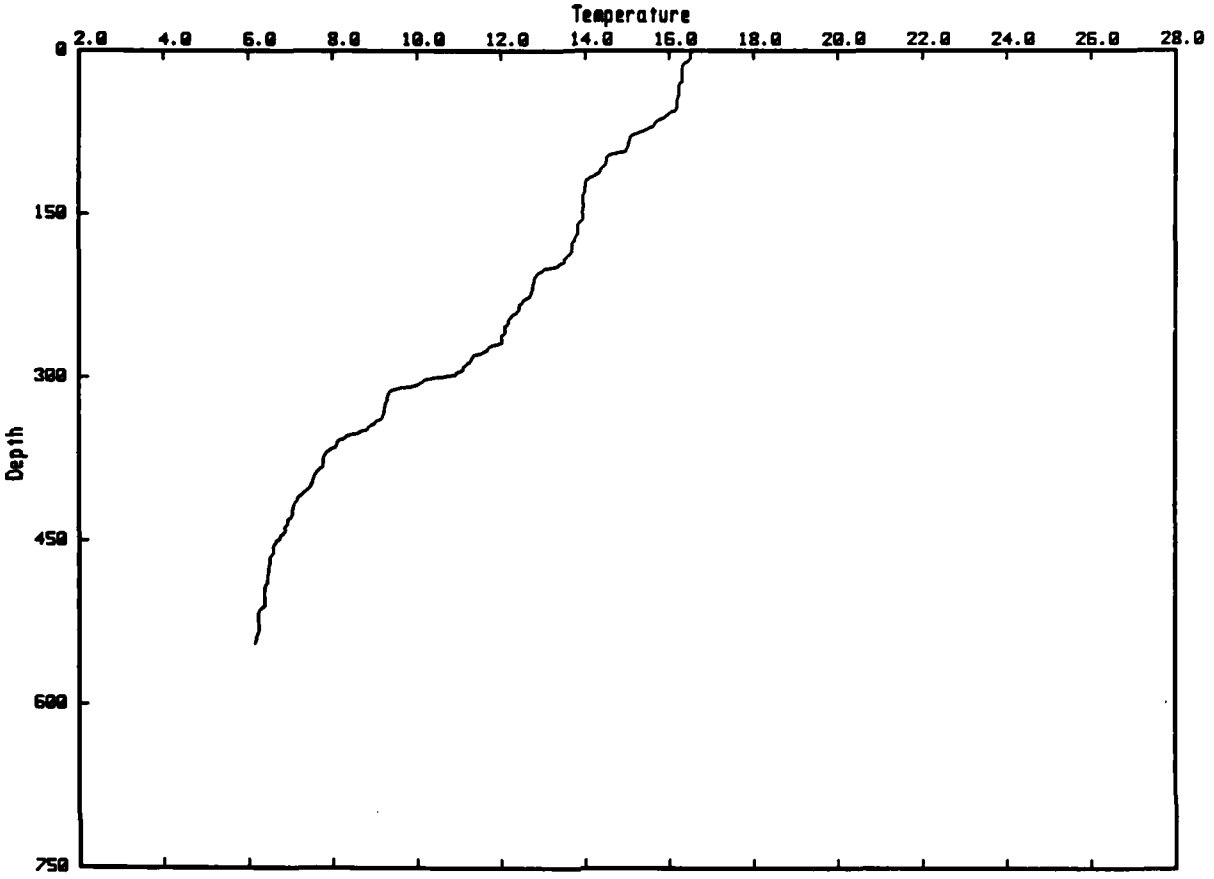
XBT DROP 159 28 35.1N 112 34.9W 28 NOV 84 1428 MST



XBT DROP 159 T-7 RADAR: SE 4.6nm 350T GULF COORDS: -22.3 233.9
JDAY 333 2128Z DEPTH 555m/555m SST 16.34 2M TEMPS: SAIL 16.47 XBT .00
GULF OF CALIFORNIA: SILL LINE, CXP2-12

Z	TEMP	Z	TEMP	Z	TEMP
10	16.3	200	13.4	390	7.4
19	16.2	210	13.0	401	7.3
30	16.3	220	12.3	410	7.2
41	16.3	230	12.0	420	7.1
50	16.2	240	12.0	430	7.0
60	16.2	250	11.5	440	6.9
69	16.2	260	11.2	450	6.7
80	16.0	271	11.1	461	6.6
89	15.8	280	11.1	470	6.6
100	15.4	290	10.8	479	6.5
110	15.3	300	9.9	490	6.5
120	14.7	311	9.3	500	6.4
130	14.2	320	9.2	510	6.3
141	14.1	330	9.2	521	6.2
150	14.1	340	8.6	531	6.2
160	13.9	350	8.3	541	6.2
170	13.9	360	7.9	550	6.2
180	13.8	370	7.8		
190	13.8	380	7.6		

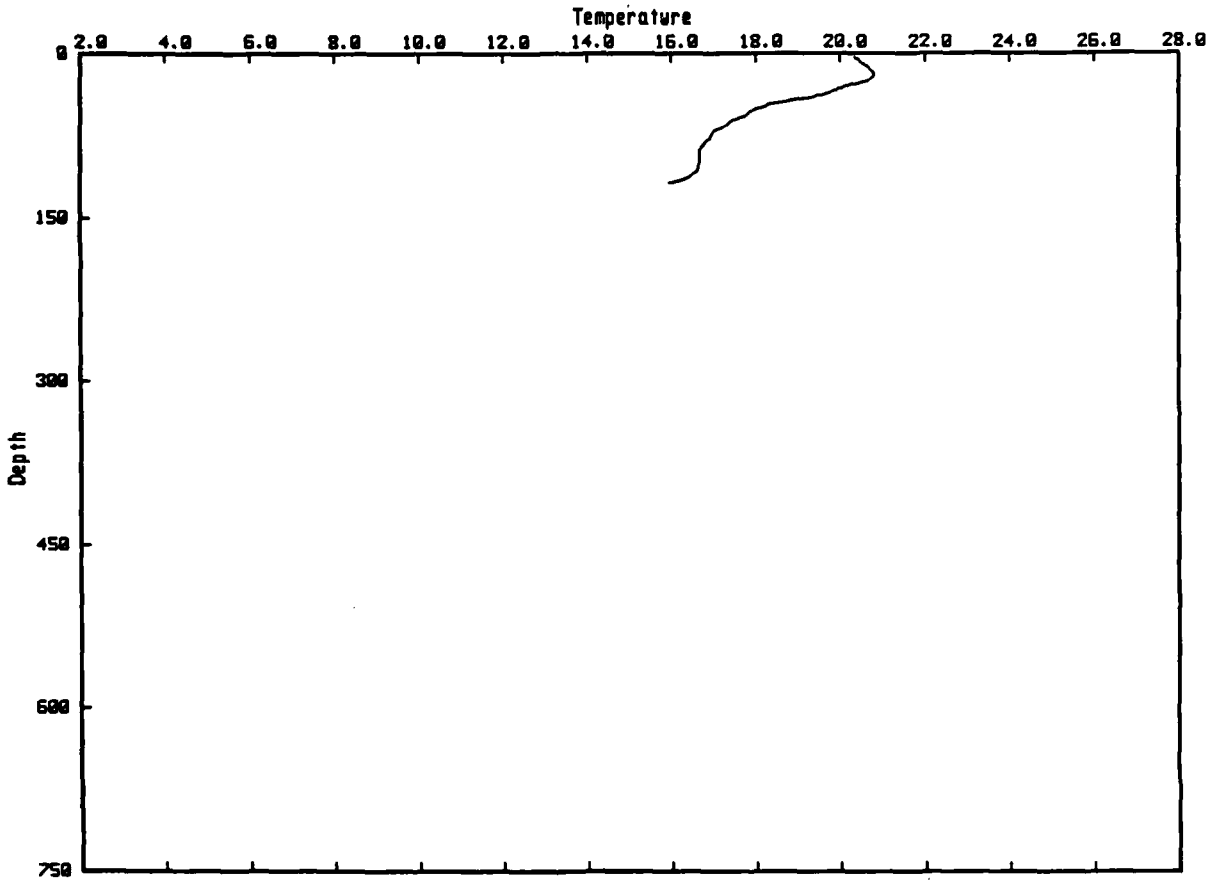
XBT DROP 160 28 34.4N 112 34.6W 28 NOV 84 1433 MST



XBT DROP 160 T-7 RADAR: SE 5.4nm 345T GULF COORDS: -22.6 232.5
JDAY 333 2133Z DEPTH 545m/545m SST 16.54 2M TEMPS: SAIL 16.51 XBT 16.51
GULF OF CALIFORNIA: END CAP N/S SILL LINE, CXP2-13, NEAP TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	16.4	200	13.0	390	7.6
21	16.3	210	12.8	400	7.5
30	16.3	220	12.7	410	7.2
41	16.2	230	12.5	421	7.1
50	16.2	240	12.4	431	7.0
60	15.9	250	12.2	440	6.9
70	15.6	260	12.1	450	6.7
80	15.1	270	11.8	460	6.6
91	15.0	281	11.3	471	6.5
100	14.5	290	11.1	479	6.5
110	14.4	300	10.4	490	6.4
120	14.0	310	9.6	500	6.4
130	14.0	320	9.3	510	6.4
140	14.0	331	9.2	520	6.3
150	14.0	340	9.0	531	6.3
160	13.9	350	8.6	540	6.2
170	13.8	360	8.1		
179	13.7	369	7.9		
190	13.5	380	7.8		

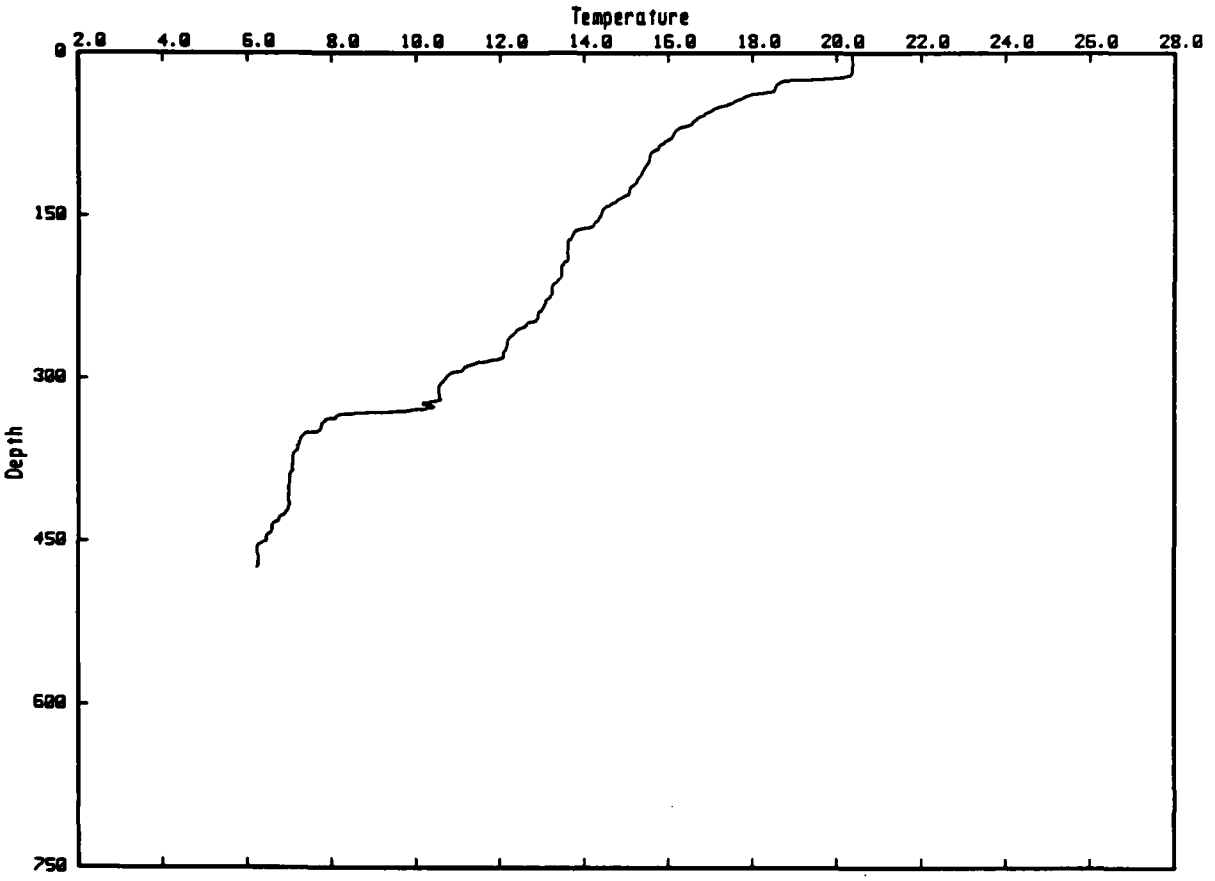
XBT DROP 161 28 34.6N 112 43.2W 29 NOV 84 1814 MST



XBT DROP 161 T-4 RADAR: SE 8.0nm 053T GULF COORDS: -33.8 241.1
JDAY 335 1142 DEPTH 120m/118m SST 19.70 2M TEMPS: SAIL 20.55 XBT 20.35
GULF OF CALIFORNIA: BEGIN CAP SL/SE SILL LINE; CXP2-14, NEAP TIDE

Z	TEMP
10	20.6
20	20.8
30	20.1
40	19.4
50	18.0
60	17.5
70	17.1
80	16.8
91	16.7
100	16.7
111	16.5
118	16.0

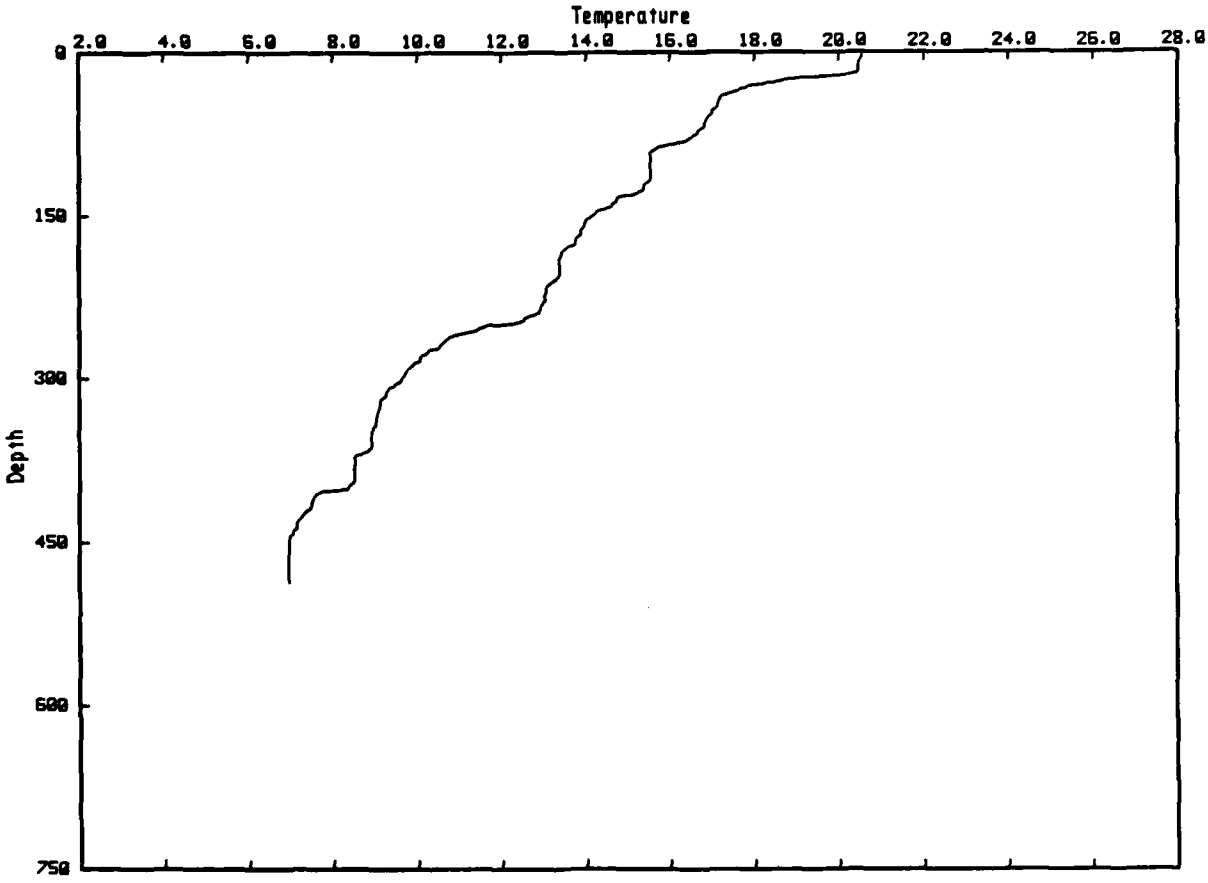
XBT DROP 162 28 35.0N 112 42.5W 29 NOV 84 1822 MST



XBT DROP 162 T-7 RADAR: SE 7.4nm 052T GULF COORDS: -32.4 241.0
JDAY 335 122Z DEPTH 474m/474m SST 20.28 2M TEMPS: SAIL 20.58 XBT 20.37
GULF OF CALIFORNIA: CAP SL/SE SILL LINE; CXP2-15

Z	TEMP	Z	TEMP	Z	TEMP
10	20.4	200	13.5	390	7.0
20	20.3	210	13.4	401	7.0
30	18.6	219	13.2	411	7.0
40	17.9	230	13.1	420	7.0
50	17.2	239	12.9	430	6.8
60	16.7	250	12.6	440	6.6
70	16.2	260	12.3	450	6.5
80	16.0	271	12.2	460	6.3
90	15.7	280	12.1	469	6.3
100	15.5	290	11.2		
110	15.4	300	10.7		
120	15.2	310	10.6		
130	15.1	320	10.6		
140	14.6	330	9.9		
150	14.4	340	7.8		
160	14.2	350	7.6		
170	13.7	360	7.2		
180	13.6	369	7.1		
190	13.6	380	7.1		

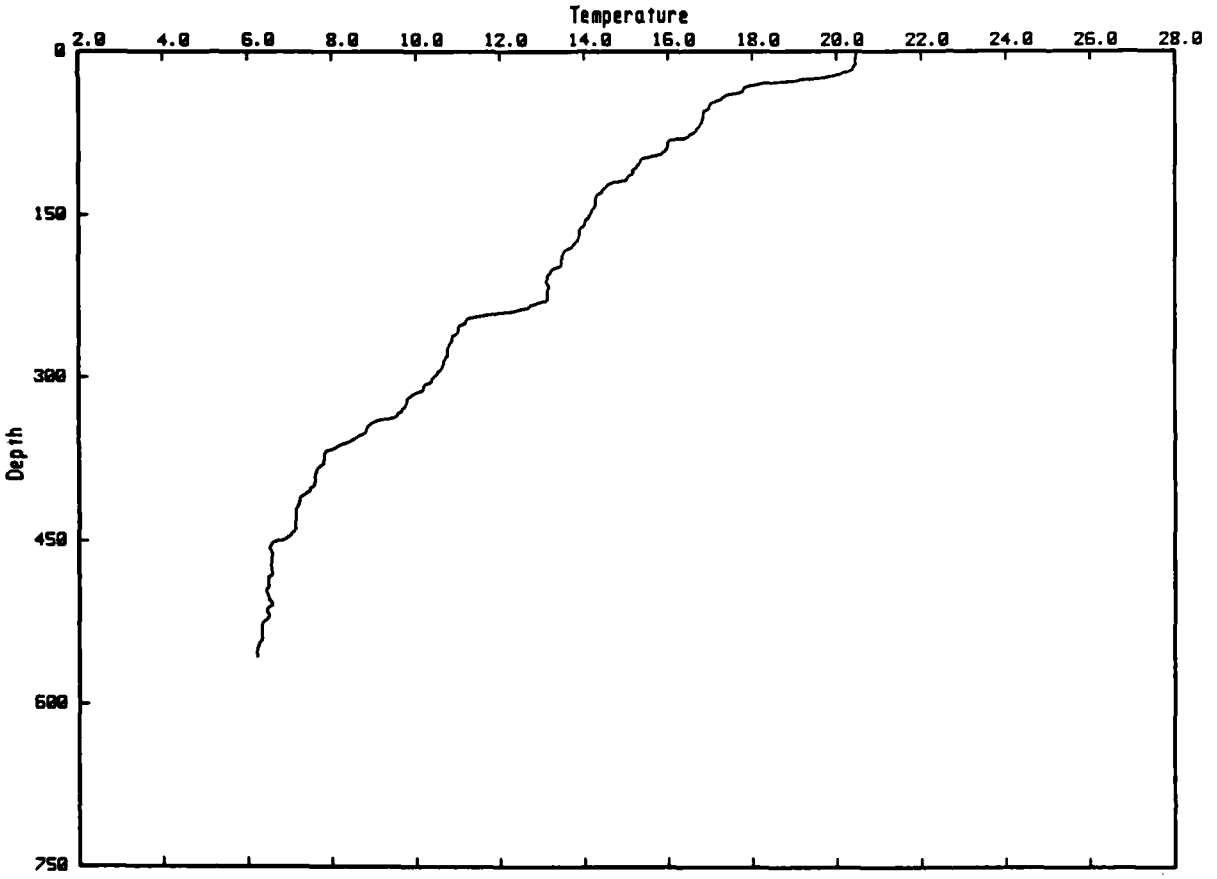
XBT DROP 163 28 35.5N 112 41.9W 29 NOV 84 1828 MST



XBT DROP 163 T-7 RADAR: SE 6.6nm 052T GULF COORDS: -31.1 241.2
JDAY 335 128Z DEPTH 487m/487m SST 20.25 2M TEMPS: SAIL 20.64 XBT 20.55
GULF OF CALIFORNIA: CAP SL/SE SILL LINE; CXP2-16

Z	TEMP	Z	TEMP	Z	TEMP
10	20.5	201	13.4	390	8.5
20	20.4	210	13.3	400	8.4
30	18.0	221	13.1	410	7.5
40	17.3	230	13.0	420	7.4
50	17.1	240	12.9	430	7.2
60	16.9	250	12.1	440	7.1
70	16.8	260	10.9	451	7.0
80	16.5	270	10.5	460	7.0
90	15.6	280	10.1	469	6.9
101	15.5	290	9.8	479	7.0
109	15.5	300	9.6		
120	15.4	311	9.3		
130	15.2	320	9.1		
141	14.6	330	9.1		
150	14.2	340	9.0		
160	14.0	349	8.9		
170	13.8	361	8.9		
180	13.6	370	8.6		
189	13.4	381	8.5		

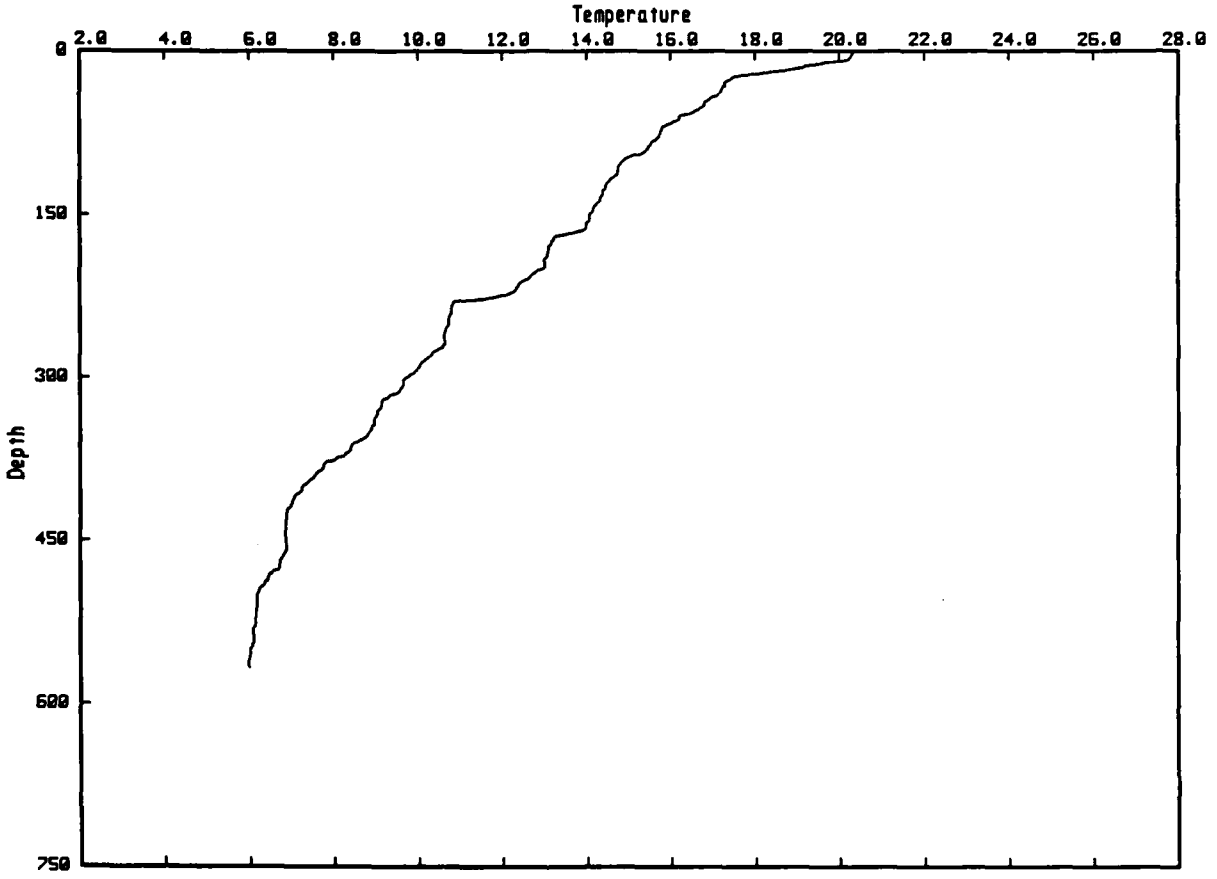
XBT DROP 164 28 35.7N 112 41.2W 29 NOV 84 1834 MST



XBT DROP 164 T-7 RADAR: SE 5.9nm 051T GULF COORDS: -30.0 240.8
JDAY 335 134Z DEPTH 557m/556m SST 20.10 2M TEMPS: SAIL 20.56 XBT 20.46
GULF OF CALIFORNIA: CAP SL/SE SILL LINE; CXP2-17

Z	TEMP	Z	TEMP	Z	TEMP
9	20.4	200	13.2	391	7.6
20	20.1	209	13.1	400	7.6
30	18.3	220	13.1	410	7.3
40	17.4	230	13.0	420	7.1
50	17.0	240	12.0	430	7.1
61	16.8	250	11.2	440	7.1
70	16.7	260	11.0	450	6.7
80	16.3	270	10.8	460	6.6
90	15.9	280	10.7	471	6.6
99	15.3	290	10.6	479	6.6
110	15.2	300	10.4	490	6.5
120	14.7	310	10.2	500	6.5
130	14.4	320	9.8	510	6.5
141	14.3	330	9.7	520	6.5
150	14.1	340	9.1	530	6.3
160	14.0	350	8.8	540	6.3
171	13.9	360	8.3	550	6.2
180	13.7	370	7.8		
190	13.5	380	7.8		

XBT DROP 165 28 36.3N 112 40.4W 29 NOV 84 1840 MST

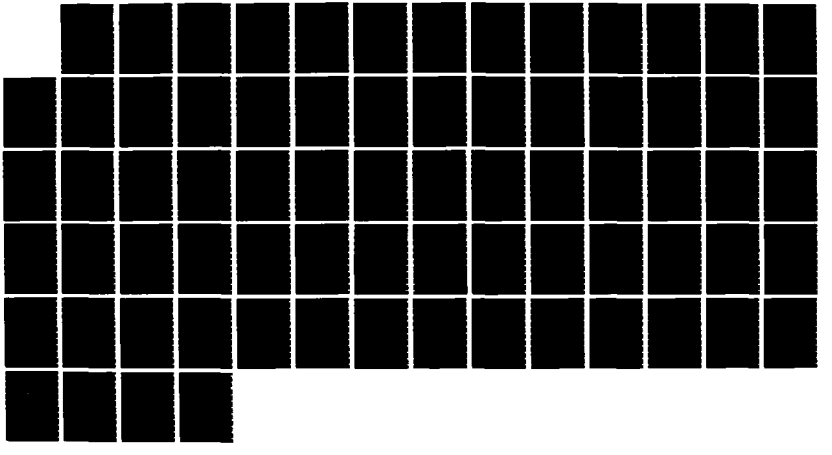


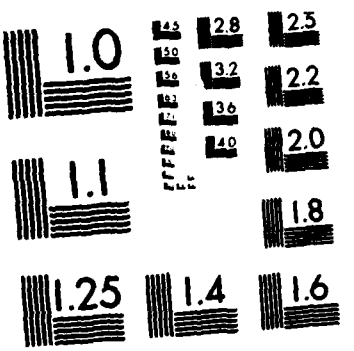
XBT DROP 165 T-7 RADAR: SE 5.2nm 051T GULF COORDS: -28.2 241.0
JDAY 335 140Z DEPTH 568m/568m SST 20.05 2M TEMPS: SAIL 20.46 XBT 20.30
GULF OF CALIFORNIA: CAP SL/SE SILL LINE; CXP2-18

Z	TEMP	Z	TEMP	Z	TEMP
10	19.9	200	13.0	390	7.6
20	18.3	210	12.6	400	7.3
30	17.3	220	12.3	411	7.1
40	17.1	230	10.9	420	6.9
50	16.8	241	10.8	429	6.9
60	16.2	250	10.7	441	6.9
71	15.8	260	10.6	450	6.9
80	15.7	270	10.6	460	6.9
90	15.4	280	10.3	471	6.7
100	14.9	290	10.0	480	6.5
110	14.7	300	9.7	490	6.4
120	14.5	310	9.6	500	6.2
130	14.4	320	9.2	510	6.2
140	14.2	330	9.1	521	6.1
150	14.1	341	9.0	530	6.1
160	14.0	350	8.9	540	6.1
170	13.3	360	8.6	549	6.0
180	13.1	370	8.3	560	6.0
190	13.0	381	7.8		

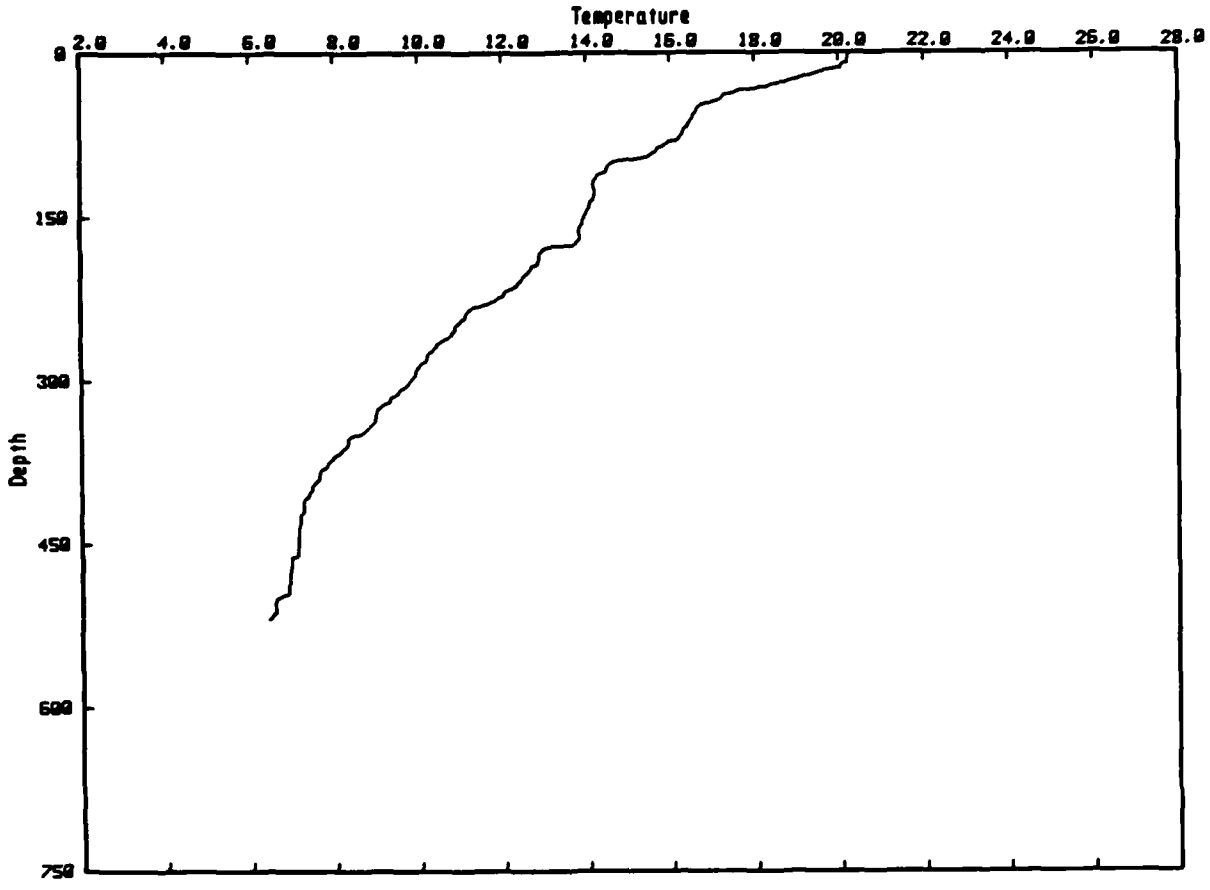
AD-A171 920 OBSERVATIONS OF TEMPERATURE FINESTRUCTURE IN THE GULF OF CALIFORNIA XBT D..(U) SCRIPPS INSTITUTION OF OCEANOGRAPHY LA JOLLA CA C A PADEN ET AL. MAR 85 3/3

UNCLASSIFIED SIO-REF-86-14 N00014-85-C-0104 F/G 8/10 NL





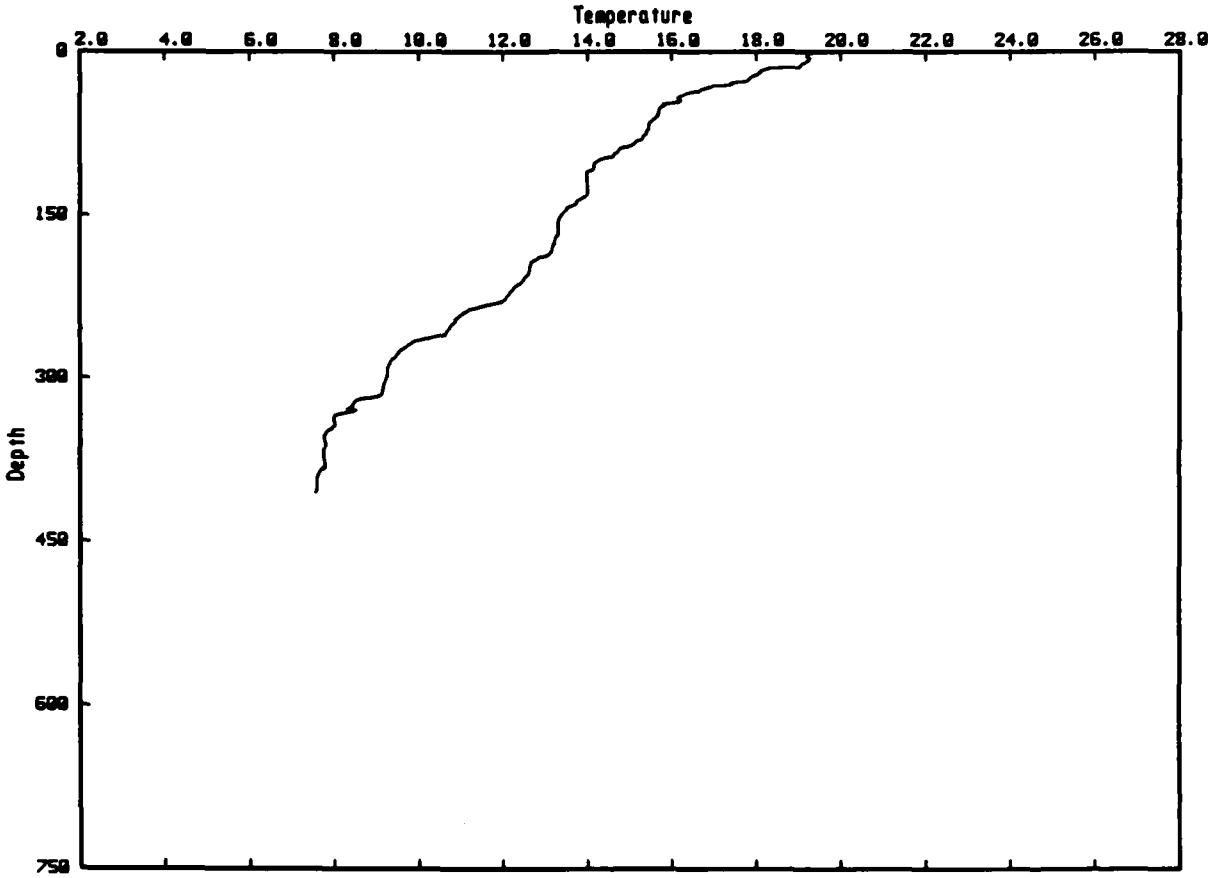
XBT DROP 166 28 37.0N 112 39.8W 29 NOV 84 1846 MST



XBT DROP 166 T-7 RADAR: SE 4.4nm 051T GULF COORDS: -26.7 241.4
JDAY 335 146Z DEPTH 520m/520m SST 19.88 2M TEMPS: SAIL 20.37 XBT 20.23
GULF OF CALIFORNIA: CAP SL/SE SILL LINE, CXP2-19

Z	TEMP	Z	TEMP	Z	TEMP
10	20.2	200	12.6	390	7.6
20	19.4	210	12.4	400	7.4
30	18.4	220	12.0	411	7.3
40	17.2	230	11.5	420	7.2
50	16.7	240	11.1	430	7.2
60	16.5	250	10.9	440	7.1
70	16.3	260	10.7	451	7.1
80	16.1	270	10.4	460	7.1
90	15.6	280	10.2	470	6.9
100	14.6	289	9.9	480	6.9
110	14.4	300	9.8	490	6.9
120	14.2	311	9.5	500	6.6
129	14.2	320	9.3	510	6.6
141	14.1	331	9.0	520	6.4
150	13.9	340	8.9		
161	13.8	350	8.4		
170	13.8	360	8.3		
180	12.9	371	8.0		
190	12.8	380	7.8		

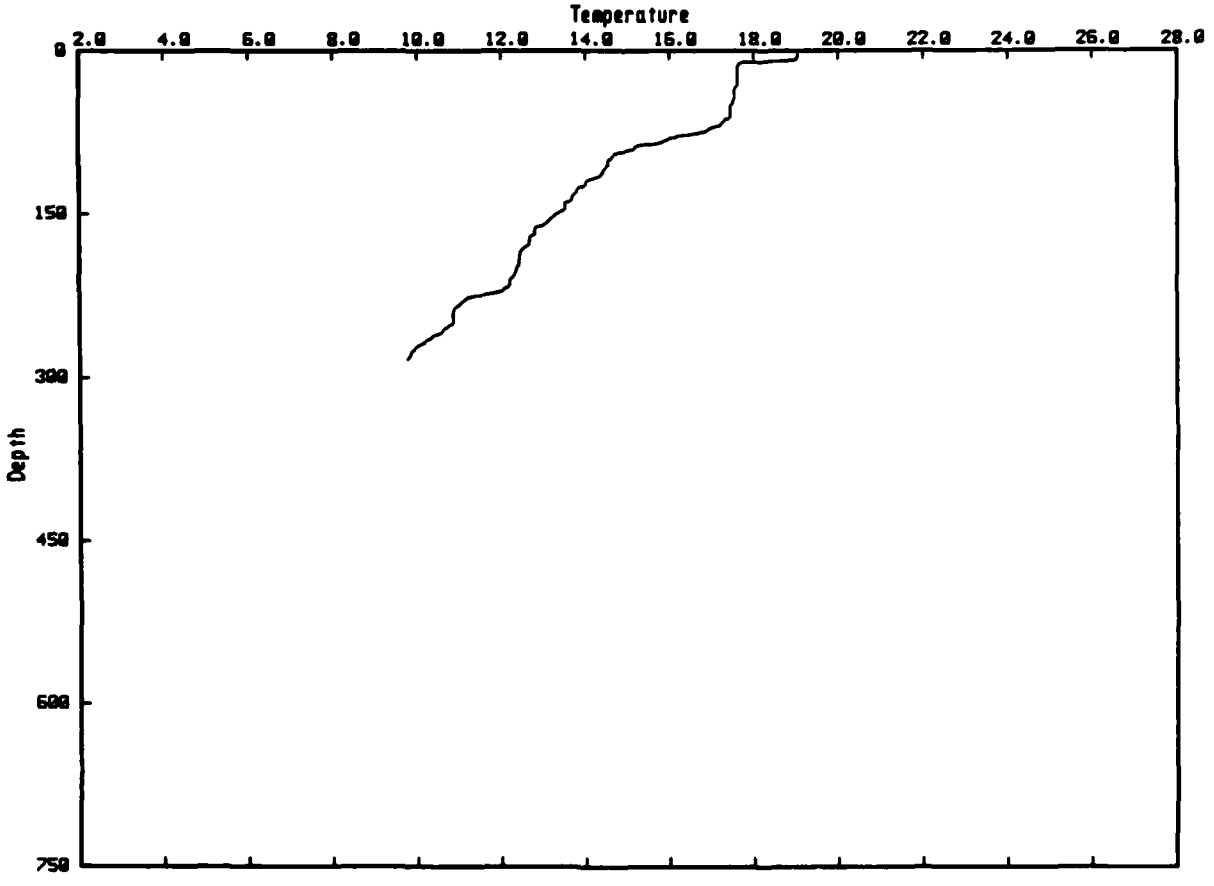
XBT DROP 167 28 37.2N 112 39.1W 29 NOV 84 1851 MST



XBT DROP 167 T-7 RADAR: SE 3.8nm 049T GULF COORDS: -25.5 241.1
JDAY 335 151Z DEPTH 407m/407m SST 19.30 2M TEMPS: SAIL 20.13 XBT 19.19
GULF OF CALIFORNIA: CAP SL/SE SILL LINE; CXP2-20

Z	TEMP	Z	TEMP	Z	TEMP
10	19.2	200	12.6	391	7.6
20	18.1	210	12.5	399	7.6
30	17.4	220	12.2		
40	16.3	230	11.9		
50	15.8	240	11.1		
60	15.6	250	10.8		
70	15.5	260	10.6		
80	15.3	270	9.7		
90	14.7	280	9.5		
100	14.3	290	9.3		
110	14.0	300	9.2		
120	14.0	310	9.2		
130	14.0	320	8.6		
140	13.7	330	8.5		
150	13.4	341	8.0		
160	13.3	350	7.8		
170	13.3	359	7.8		
179	13.2	371	7.8		
190	12.8	380	7.8		

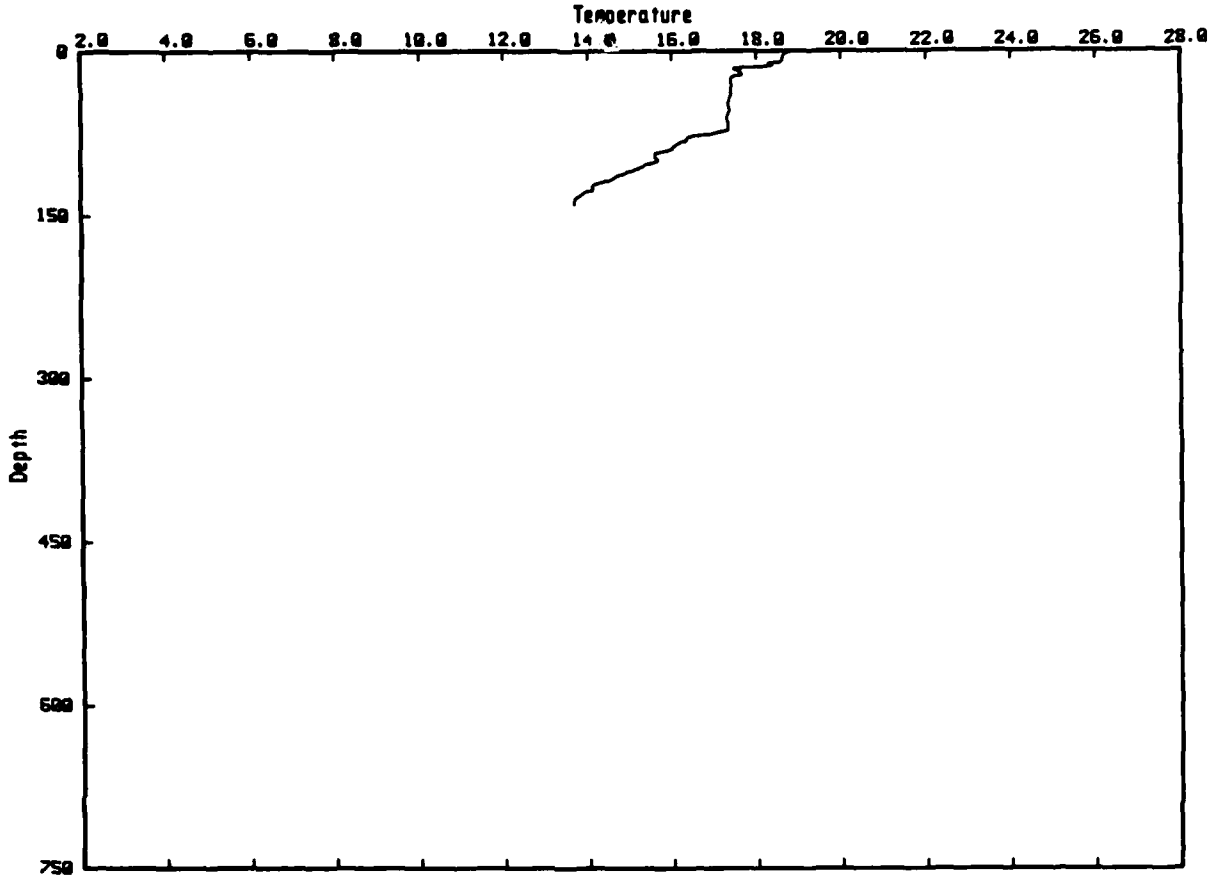
XBT DROP 168 28 37.4N 112 38.4W 29 NOV 84 1855 MST



XBT DROP 168 T-7 RADAR: SE 3.3nm 049T GULF COORDS: -24.4 240.7
JDAY 335 1552 DEPTH 284m/284m SST 18.86 2M TEMPS: SAIL 18.45 XBT 19.05
GULF OF CALIFORNIA: CAP SL/SE SILL LINE, CXP2-21

Z	TEMP	Z	TEMP
10	18.3	200	12.4
21	17.6	209	12.2
31	17.6	220	12.1
40	17.5	230	11.1
50	17.5	240	10.9
61	17.5	250	10.8
70	17.1	260	10.5
80	16.1	270	10.1
90	15.2	280	9.8
100	14.6		
110	14.4		
120	14.0		
130	13.8		
140	13.5		
150	13.3		
160	13.0		
170	12.7		
180	12.6		
190	12.4		

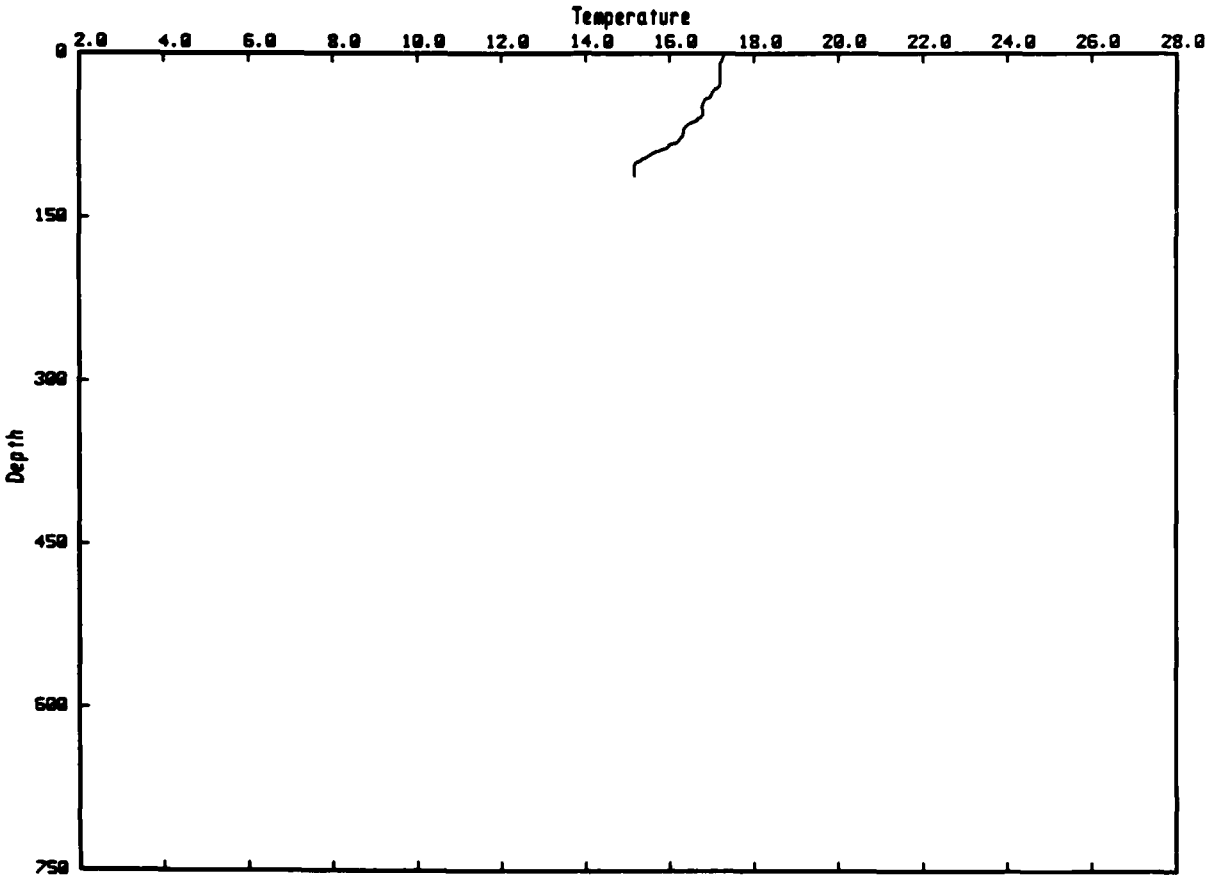
XBT DROP 169 28 37.8N 112 38.1W 29 NOV 84 1900 MST



XBT DROP 169 T-7 RADAR: SE 2.7nm 050T GULF COORDS: -23.5 241.0
JDAY 335 200Z DEPTH 141m/141m SST 18.70 2M TEMPS: SAIL 18.24 XBT 18.65
GULF OF CALIFORNIA: CAP SL/SE SILL LINE, CXP2-22

Z	TEMP
10	18.6
20	17.6
30	17.4
40	17.4
51	17.3
60	17.3
70	17.3
80	16.4
90	16.0
100	15.6
110	15.0
120	14.3
130	13.9
140	13.7

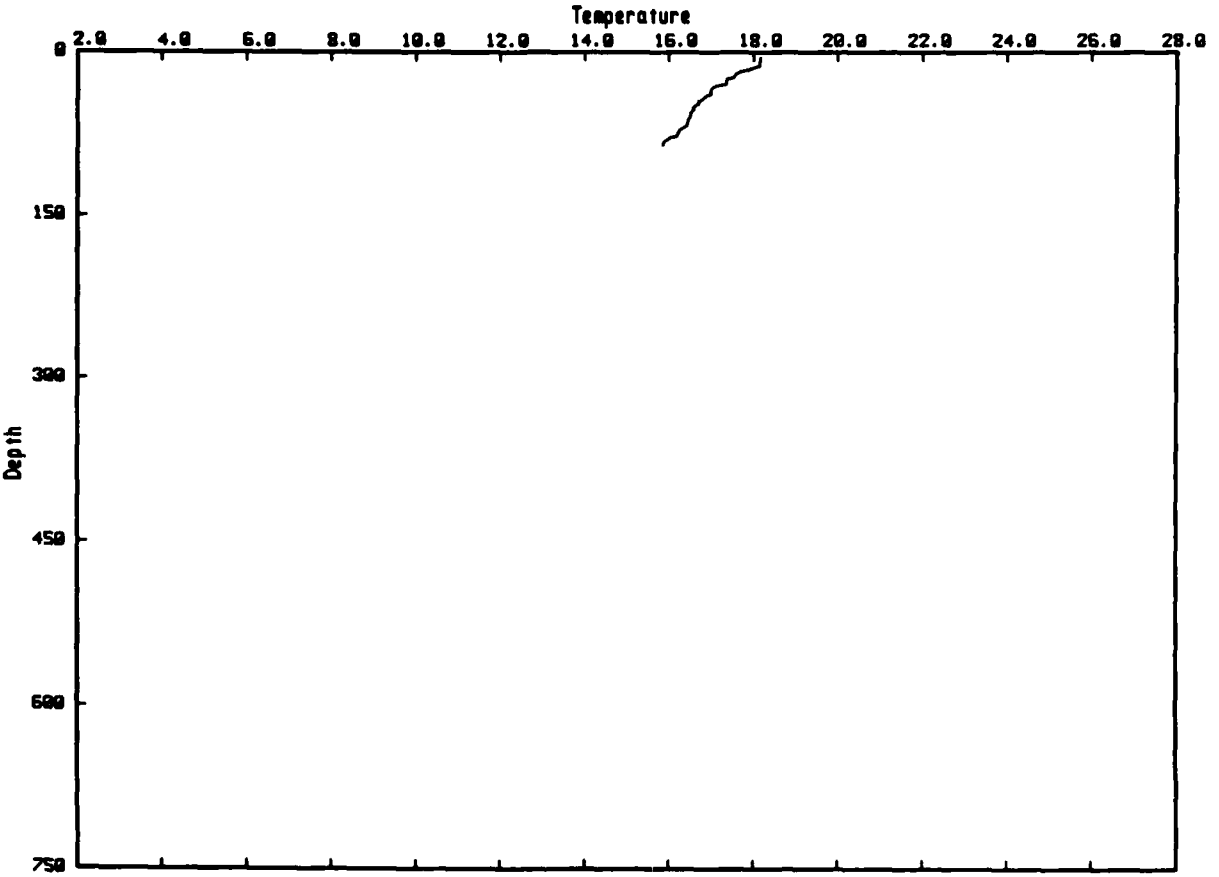
XBT DROP 170 28 38.3N 112 37.2W 29 NOV 84 1905 MST



XBT DROP 170 T-7 RADAR: SE 1.9nm 050T GULF COORDS: -21.8 240.9
JDAY 335 205Z DEPTH 113m/113m SST 17.81 2M TEMPS: SAIL 19.02 XBT 17.27
GULF OF CALIFORNIA: CAP SL/SE SILL LINE, CXP2-23

Z	TEMP
10	17.2
20	17.2
30	17.2
40	17.0
50	16.8
60	16.7
70	16.3
80	16.2
90	15.7
100	15.2
110	15.2

XBT DROP 171 28 38.6N 112 36.6W 29 NOV 84 1911 MST



XBT DROP 171 T-7 RADAR: SE 1.4nm 047T GULF COORDS: -20.7 240.7
JDAY 335 211Z DEPTH 86m/ 85m SST 17.96 2M TEMPS: SAIL 18.94 XBT .00
GULF OF CALIFORNIA: END CAP SL/SE SILL LINE, CXP2-24, NEAP TIDE

Z	TEMP
10	18.1
20	17.6
30	17.2
40	16.9
50	16.6
60	16.5
70	16.3
80	15.9

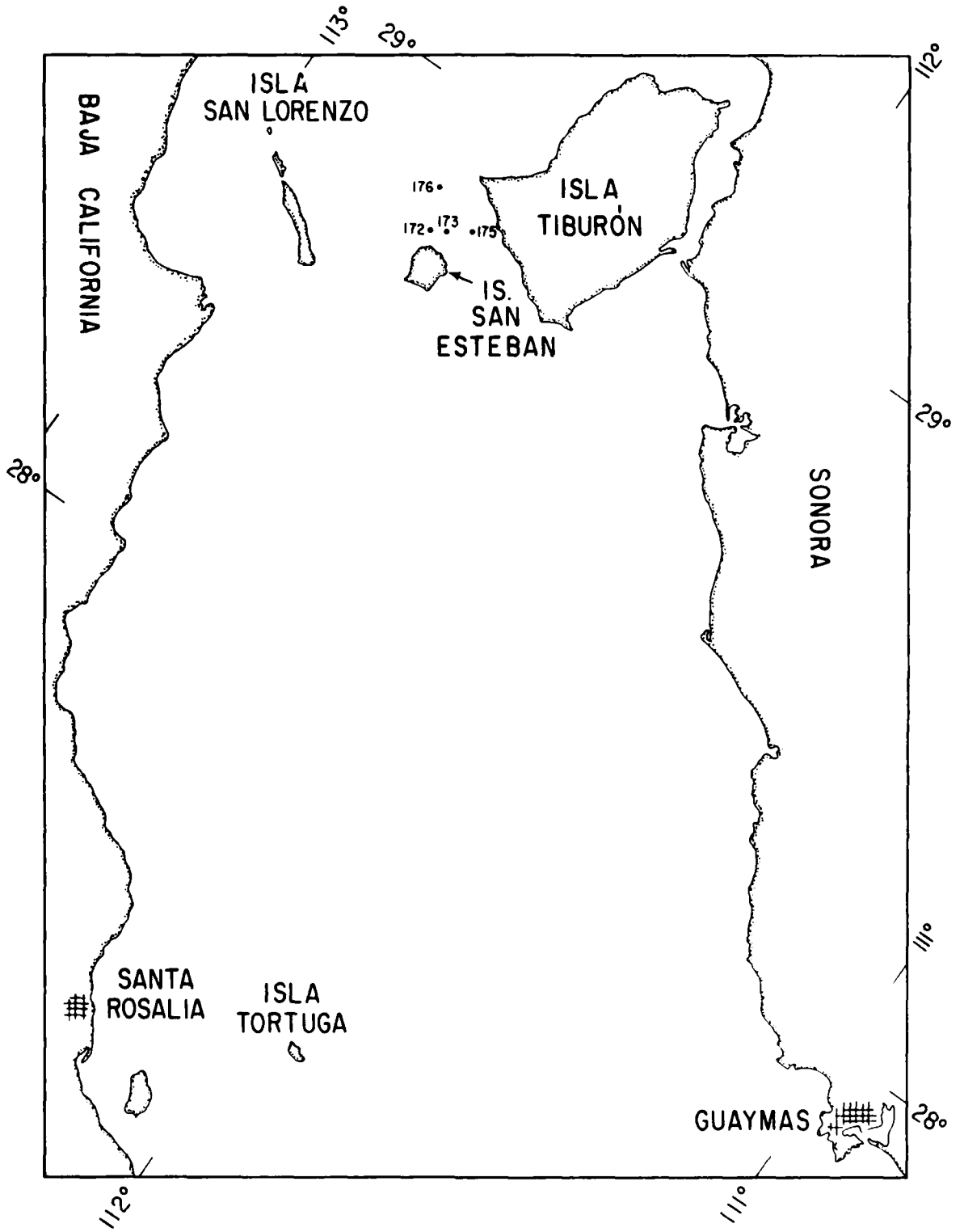
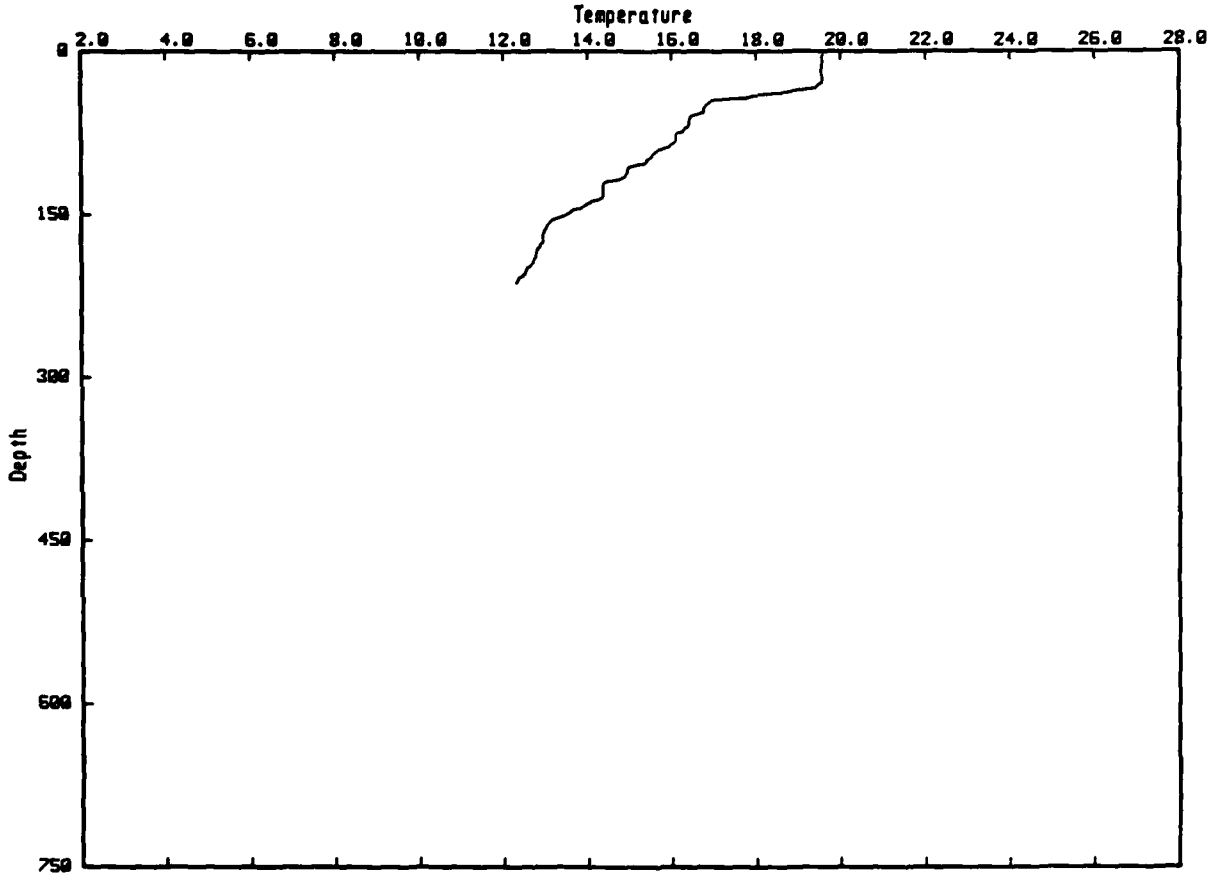


Figure 22. Tiburon Section: XBT Station Locations

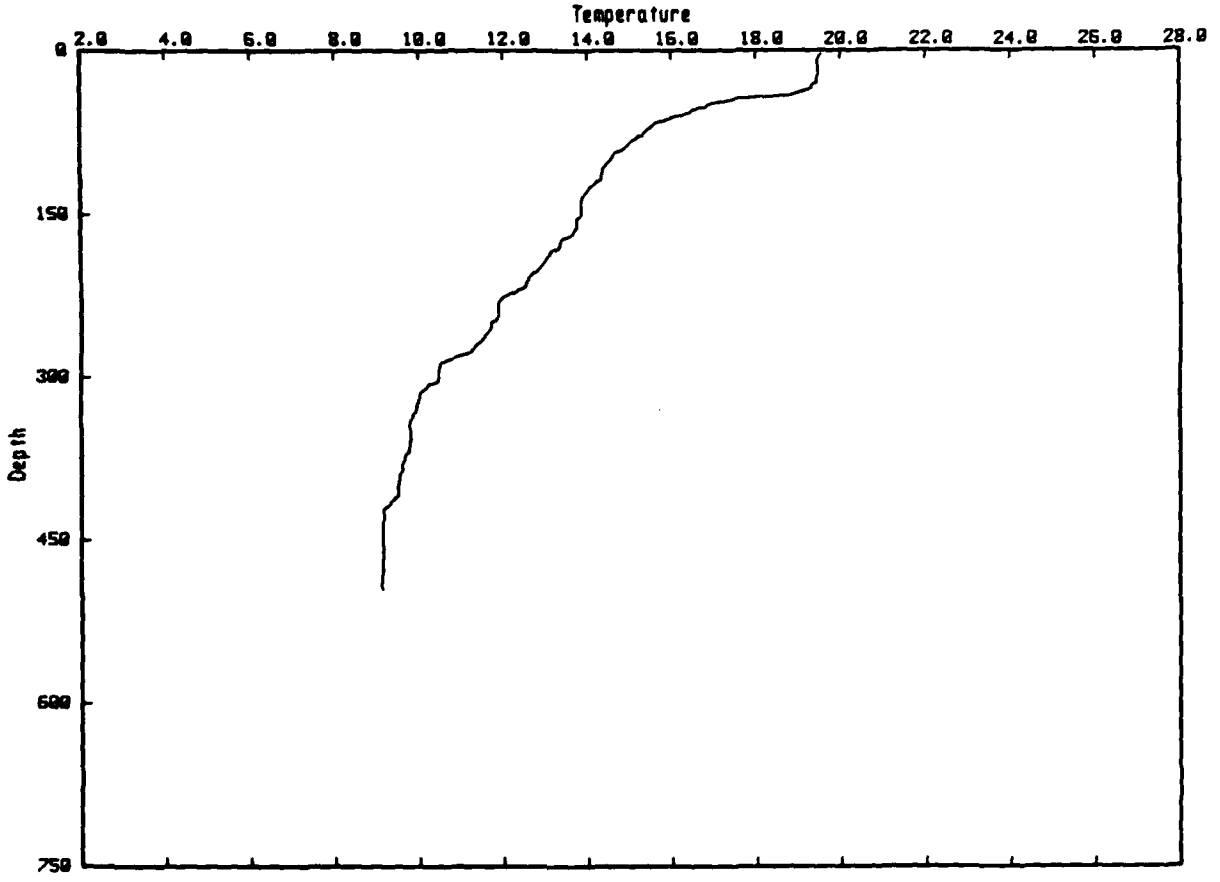
XBT DROP 172 28 46.0N 112 36.7W 30 NOV 84 0103 MST



XBT DROP 172 T-7 RADAR: SWL 6.5nm 055T GULF COORDS: -12.7 251.9
JDAY 335 803Z DEPTH 214m/213m SST .00 2M TEMPS: SAIL 19.67 XBT 19.58
GULF OF CALIFORNIA: TIBURON CHANNEL

Z	TEMP	Z	TEMP
10	19.6	200	12.5
20	19.5	210	12.3
30	19.5		
40	18.1		
50	16.8		
60	16.4		
70	16.3		
80	16.1		
90	15.7		
100	15.4		
110	14.9		
120	14.4		
130	14.4		
140	14.0		
150	13.5		
160	13.0		
170	12.9		
180	12.9		
190	12.8		

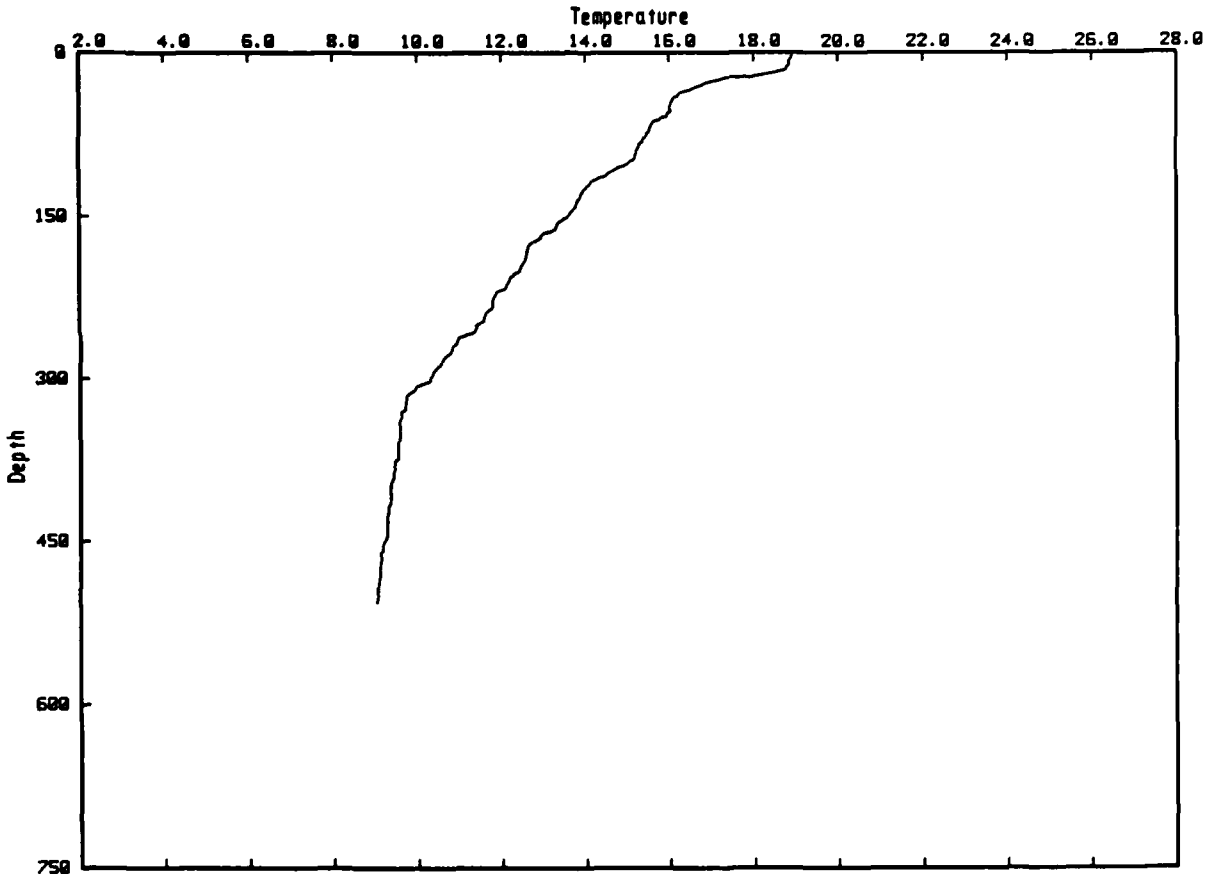
XBT DROP 173 28 47.0N 112 35.0W 30 NOV 84 0114 MST



XBT DROP 173 T-7 RADAR: SWL 4.5nm 055T GULF COORDS: -9.3 251.7
JDAY 335 814Z DEPTH 497m/495m SST .00 2M TEMPS: SAIL 19.60 XBT 19.54
GULF OF CALIFORNIA: TIBURON CHANNEL

Z	TEMP	Z	TEMP	Z	TEMP
10	19.5	200	12.9	390	9.5
20	19.5	210	12.6	400	9.5
30	19.4	220	12.3	410	9.5
40	18.9	230	11.9	420	9.2
50	16.9	240	11.9	430	9.1
60	16.2	250	11.7	441	9.1
70	15.5	260	11.6	450	9.1
80	15.2	270	11.3	460	9.1
90	14.9	280	10.9	470	9.1
100	14.6	290	10.5	480	9.1
110	14.4	300	10.4	491	9.1
120	14.2	310	10.1		
130	14.0	320	10.0		
140	13.9	330	9.9		
150	13.8	340	9.8		
161	13.7	350	9.8		
170	13.6	360	9.8		
180	13.3	370	9.7		
190	13.0	380	9.6		

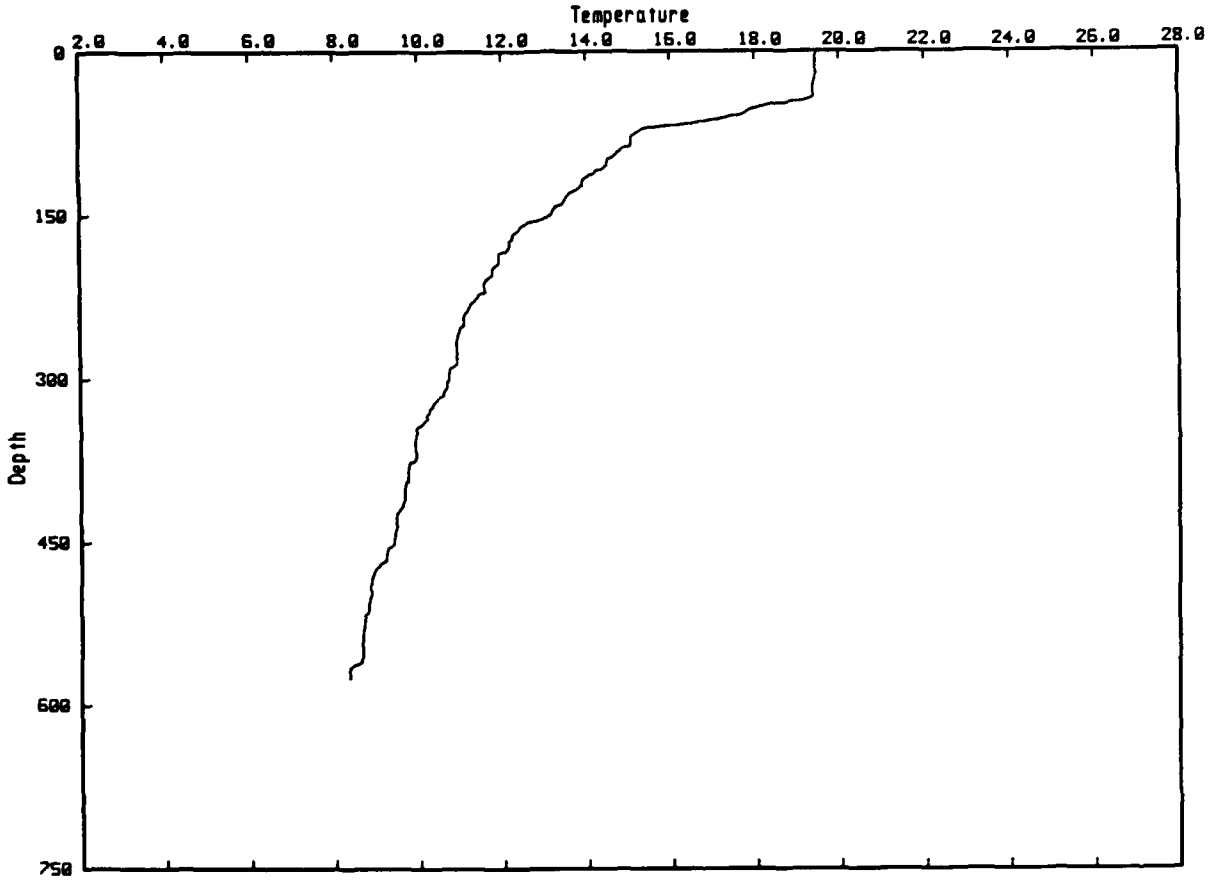
XBT DROP 175 28 48.6N 112 32.5W 30 NOV 84 0130 MST



XBT DROP 175 T-7 RADAR: SWL 1.9nm 056T GULF COORDS: -4.3 251.7
JDAY 335 830Z DEPTH 506m/506m SST 18.61 2M TEMPS: SAIL 19.19 XBT 18.90
GULF OF CALIFORNIA: TIBURON CHANNEL

Z	TEMP	Z	TEMP	Z	TEMP
10	18.9	200	12.4	390	9.4
20	18.3	210	12.2	400	9.4
30	16.8	220	11.9	411	9.4
40	16.2	230	11.8	420	9.3
49	16.0	240	11.6	430	9.3
60	15.8	250	11.4	441	9.3
70	15.5	260	11.1	450	9.2
80	15.4	269	10.8	460	9.1
90	15.2	281	10.6	470	9.1
100	15.1	290	10.4	480	9.1
110	14.6	300	10.3	489	9.1
120	14.1	310	9.9	500	9.1
130	13.9	320	9.7		
141	13.8	330	9.6		
150	13.6	340	9.6		
160	13.3	350	9.6		
170	12.9	360	9.5		
179	12.6	371	9.5		
190	12.6	380	9.4		

XBT DROP 176 28 50.4N 112 39.0W 30 NOV 84 0210 MST



XBT DROP 176 T-7 RADAR: WL 3.9nm 048T GULF COORDS: -10.9 260.6
JDAY 335 910Z DEPTH 575m/574m SST .00 2M TEMPS: SAIL 19.61 XBT 19.45
GULF OF CALIFORNIA: TIBURON CHANNEL

Z	TEMP	Z	TEMP	Z	TEMP
9	19.4	200	11.8	390	9.7
19	19.5	210	11.6	400	9.7
30	19.4	220	11.6	410	9.6
40	19.4	230	11.3	420	9.5
50	18.2	240	11.1	429	9.5
60	17.4	250	11.1	440	9.4
70	15.5	260	10.9	451	9.4
80	15.1	269	10.9	460	9.2
90	14.9	280	10.9	470	9.1
100	14.5	290	10.8	479	8.9
110	14.2	300	10.7	491	8.9
120	13.9	310	10.6	500	8.9
130	13.6	320	10.4	509	8.8
140	13.4	330	10.2	519	8.7
150	13.1	340	10.1	530	8.7
160	12.4	350	9.9	540	8.6
170	12.2	361	9.9	550	8.6
180	12.2	371	9.9	560	8.6
190	11.9	380	9.8	570	8.3

Pichicuco VII

March 1985

San Esteban Sill

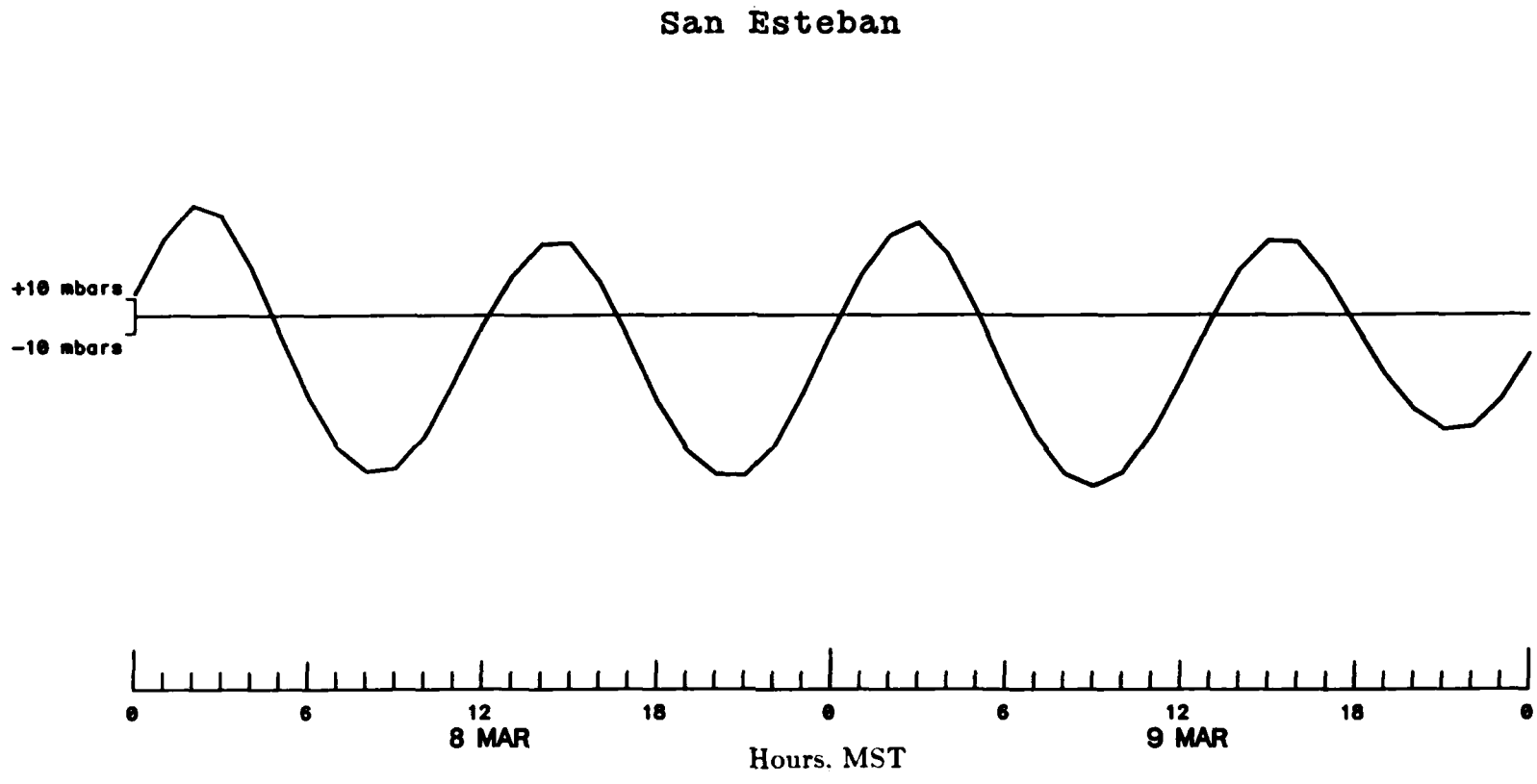


Figure 23. Bottom Pressure at San Esteban Island.
8-9 March 1985.

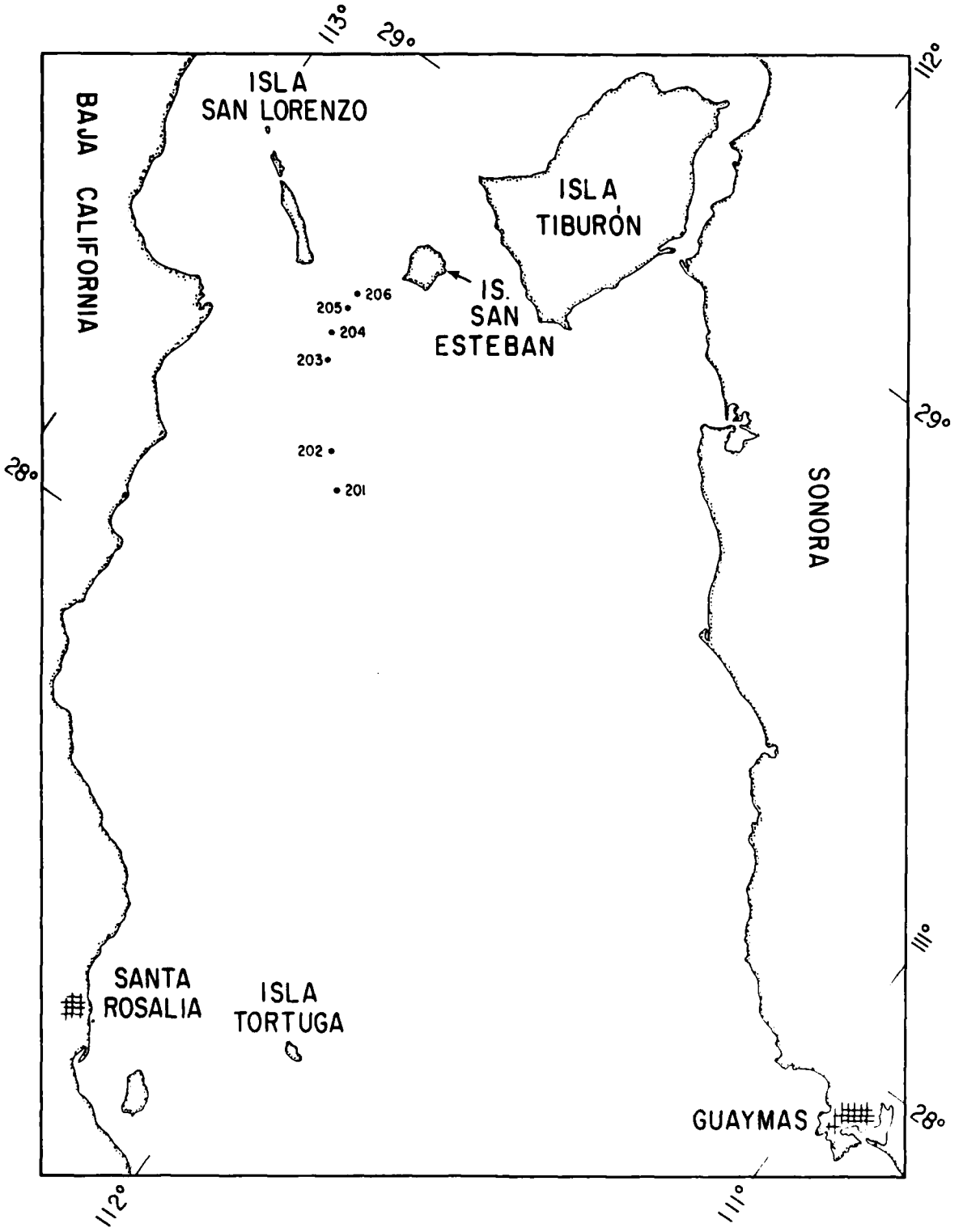
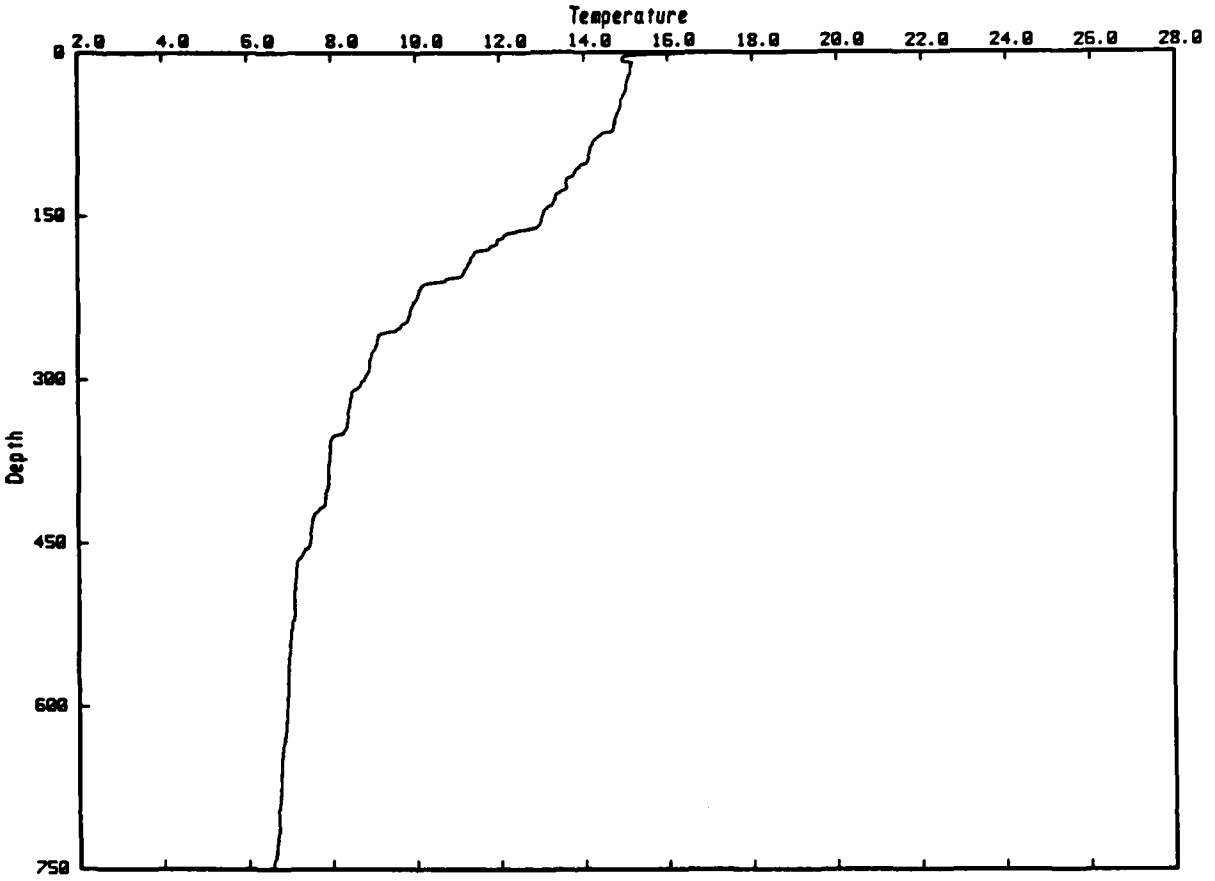


Figure 24. MX3 Section: XBT Station Locations

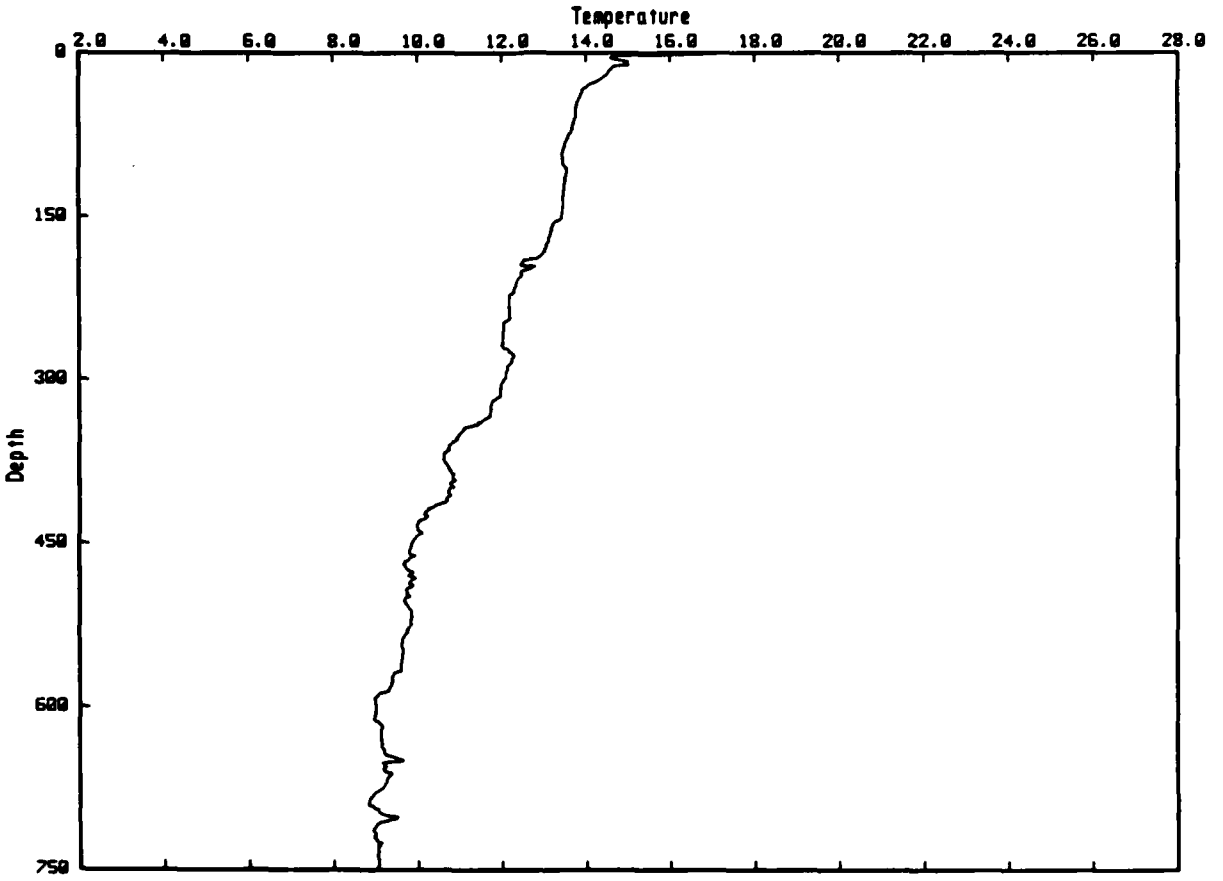
XBT DROP 201 28 17.5N 112 26.7W 9 MAR 85 0652 MST



XBT DROP 201 T-7 RADAR: SE 23.4nm 340T GULF COORDS: -30.7 199.7
JDAY 68 1352Z DEPTH 961m/760m SST .00 2M TEMPS: SAIL 14.68 XBT 15.62
GULF OF CALIFORNIA: BEGIN MX3; MX3-1, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	15.2	200	11.2	390	7.9	580	7.0
20	15.1	210	10.7	400	7.9	590	6.9
30	15.0	220	10.1	410	7.9	600	6.9
40	15.0	230	9.9	420	7.7	610	6.9
50	14.9	240	9.9	430	7.6	620	6.9
60	14.8	250	9.7	440	7.5	630	6.9
70	14.7	260	9.1	450	7.5	640	6.8
80	14.3	270	9.1	460	7.3	650	6.8
90	14.2	280	8.9	470	7.2	660	6.8
100	14.1	290	8.9	480	7.1	670	6.8
110	13.8	300	8.8	490	7.1	680	6.8
120	13.6	310	8.5	500	7.1	690	6.8
130	13.4	320	8.4	510	7.1	700	6.7
140	13.3	330	8.4	520	7.1	710	6.7
150	13.0	340	8.4	530	7.0	720	6.7
160	12.9	350	8.2	540	7.0	730	6.7
170	12.1	360	8.0	550	7.0	740	6.6
180	11.8	370	8.0	560	7.0	750	6.6
190	11.3	380	7.9	570	7.0	760	6.6

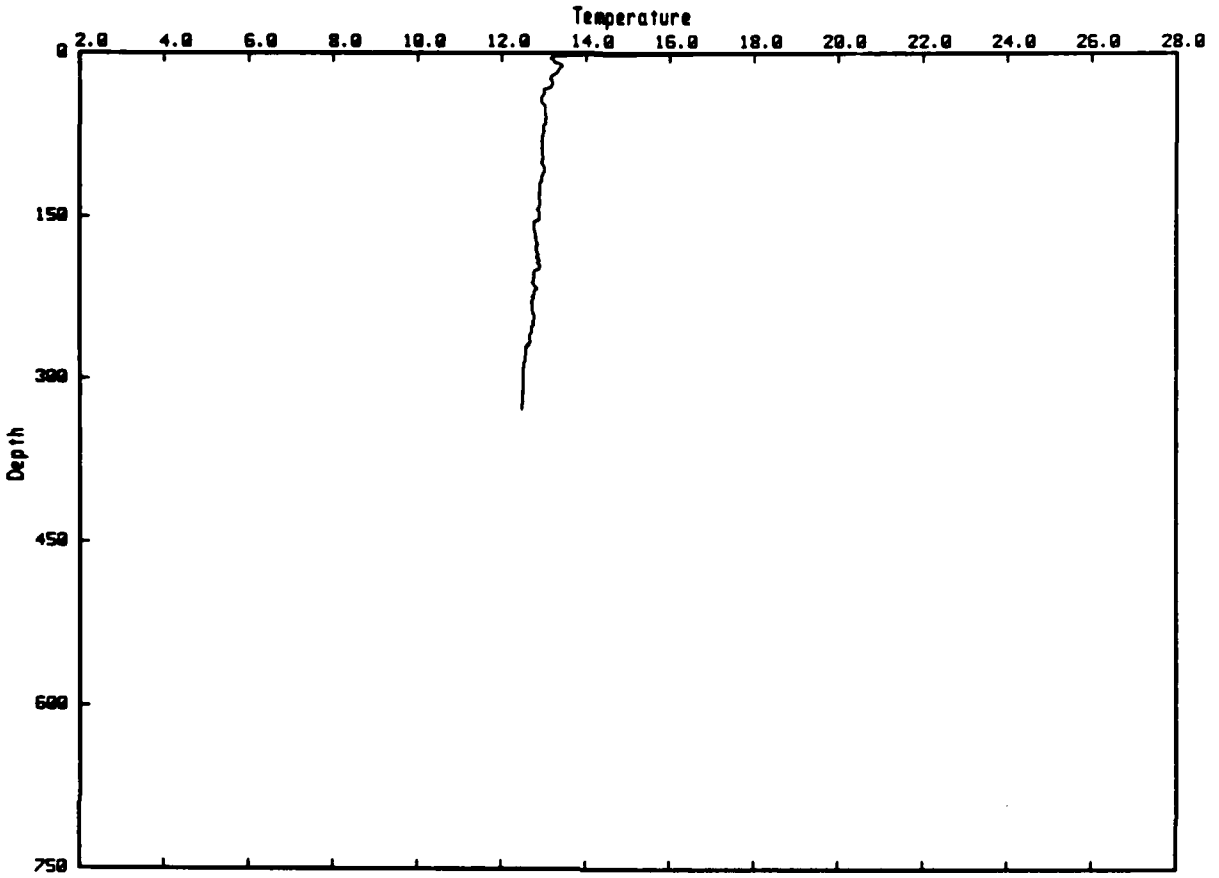
XBT DROP 202 28 20.6N 112 30.1W 9 MAR 85 0717 MST



XBT DROP 202 T-7 RADAR: SE 19.2nm 345T GULF COORDS: -31.8 207.6
JDAY 68 1417Z DEPTH 760m/760m SST 14.68 2M TEMPS: SAIL .00 XBT 16.35
GULF OF CALIFORNIA: MX3-2, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	15.0	200	12.5	390	10.8	580	9.4
20	14.5	210	12.4	400	10.8	590	9.0
30	14.1	220	12.3	410	10.7	600	9.0
40	13.9	230	12.2	420	10.2	610	9.0
50	13.8	240	12.2	430	10.0	620	9.2
60	13.7	250	12.0	440	10.1	630	9.1
70	13.7	260	12.0	450	9.9	640	9.2
80	13.5	270	12.0	460	9.8	650	9.6
90	13.5	280	12.3	470	9.7	660	9.3
100	13.5	290	12.1	480	9.8	670	9.3
110	13.6	300	12.0	490	9.8	680	9.0
120	13.5	310	12.0	500	9.7	690	8.8
130	13.5	320	11.8	510	9.8	700	9.2
140	13.5	330	11.7	520	9.8	710	9.0
150	13.4	340	11.5	530	9.8	720	9.0
160	13.2	350	11.0	540	9.6	730	9.0
170	13.1	360	10.8	550	9.7	740	9.0
180	13.0	370	10.6	560	9.6	750	9.0
190	12.5	380	10.8	570	9.4	760	9.1

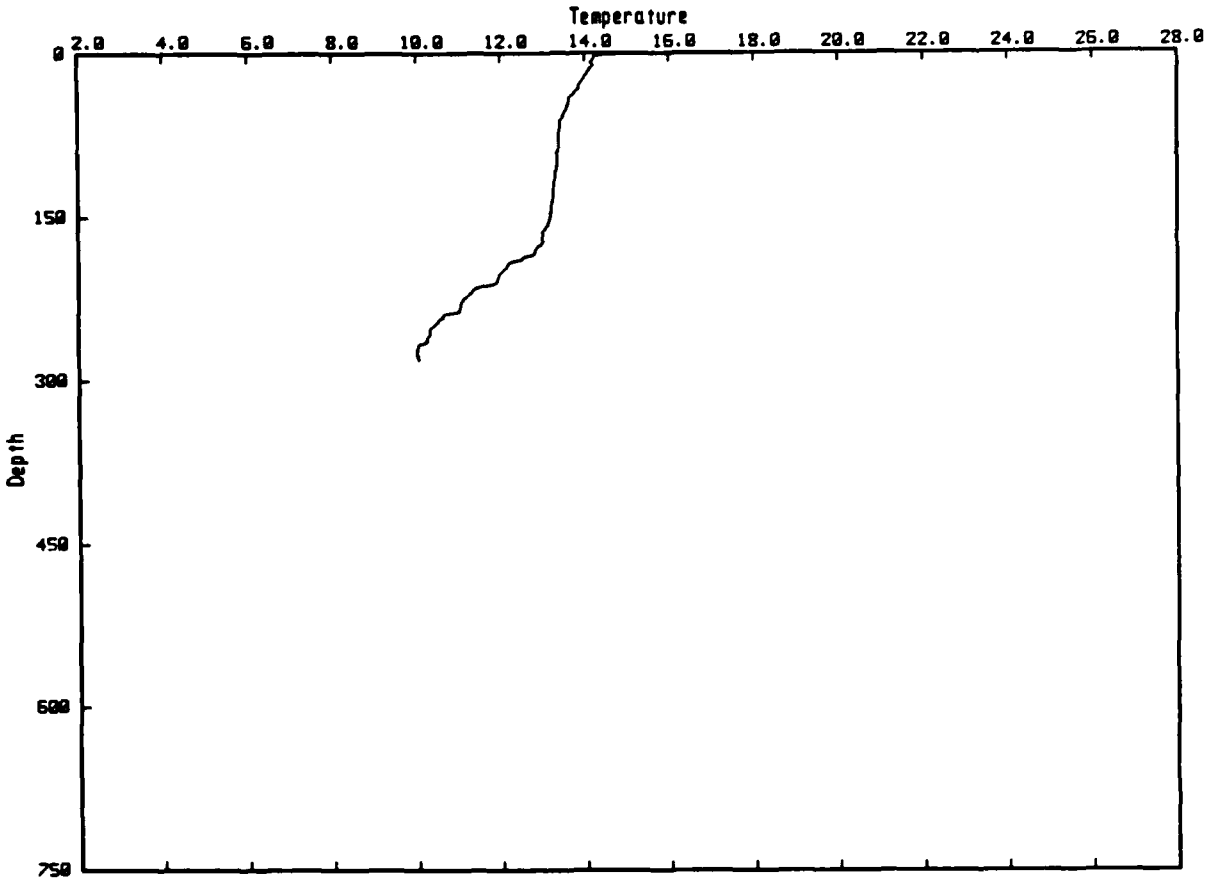
XBT DROP 203 28 28.3N 112 36.9W 9 MAR 85 0806 MST



XBT DROP 203 T-7 RADAR: SE 11.2nm 005T GULF COORDS: -32.4 225.7
JDAY 68 1506Z DEPTH 330m/330m SST 13.44 2M TEMPS: SAIL 13.24 XBT 14.09
GULF OF CALIFORNIA: MX3-3, SPRING TIDE

Z	TEMP	Z	TEMP
10	13.3	200	12.8
20	13.2	210	12.7
30	13.2	220	12.8
40	12.9	230	12.7
50	13.0	240	12.7
60	13.0	250	12.8
70	13.0	260	12.7
80	13.0	270	12.6
90	13.0	280	12.6
100	13.0	290	12.5
110	13.0	300	12.5
120	12.9	310	12.5
130	12.9	320	12.5
140	12.9	330	12.5
150	12.9		
160	12.8		
170	12.8		
180	12.8		
190	12.9		

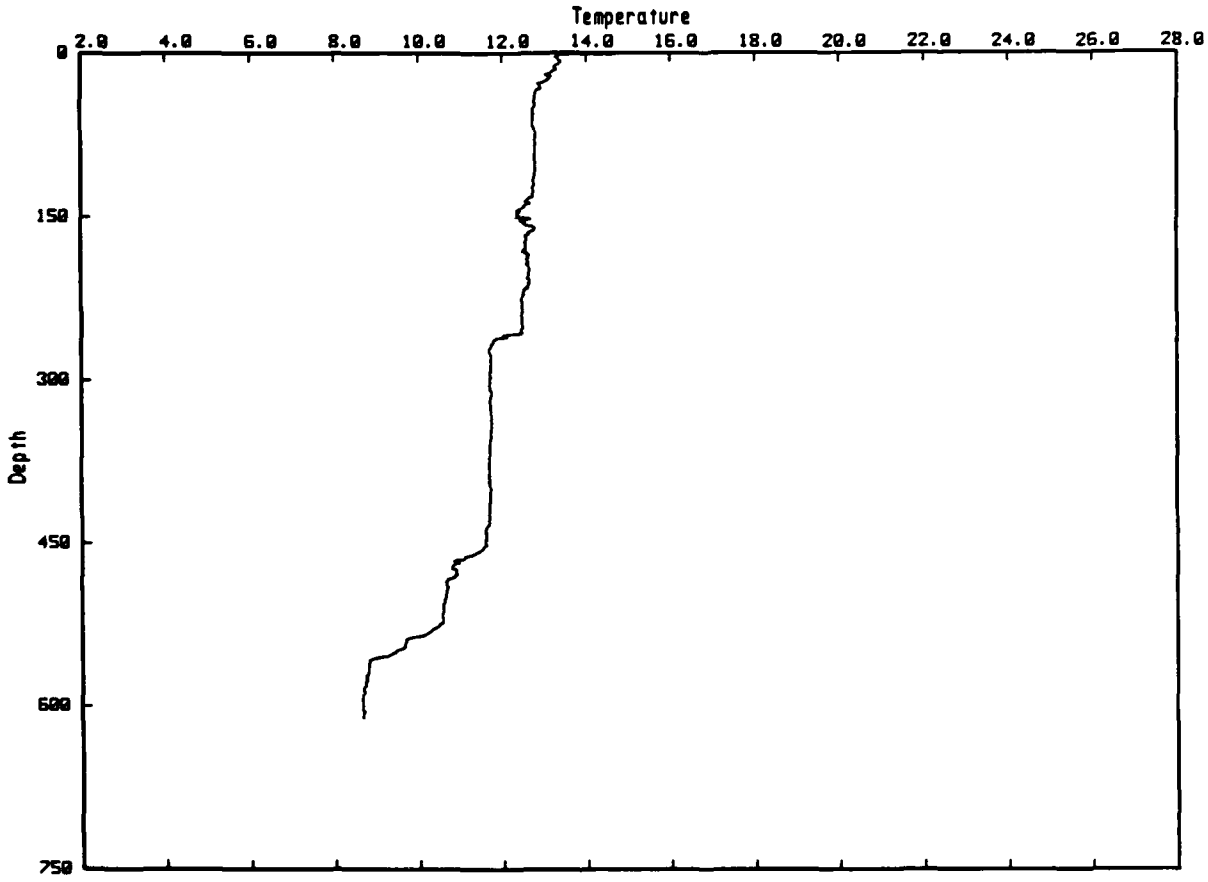
XBT DROP 204 28 31.0N 112 38.5W 9 MAR 85 0828 MST



XBT DROP 204 T-7 RADAR: SE 8.8nm 016T GULF COORDS: -31.5 231.2
JDAY 68 1528Z DEPTH 282m/282m SST 14.35 2M TEMPS: SAIL 14.02 XBT 14.45
GULF OF CALIFORNIA: MX3-4, SPRING TIDE

Z	TEMP	Z	TEMP
10	14.2	200	12.0
20	14.0	210	11.9
30	13.9	220	11.3
40	13.6	230	11.0
50	13.6	240	10.6
60	13.5	250	10.4
70	13.4	260	10.3
80	13.4	270	10.0
90	13.4	280	10.1
100	13.3		
110	13.3		
120	13.3		
130	13.2		
140	13.2		
150	13.2		
160	13.1		
170	13.0		
180	12.8		
190	12.4		

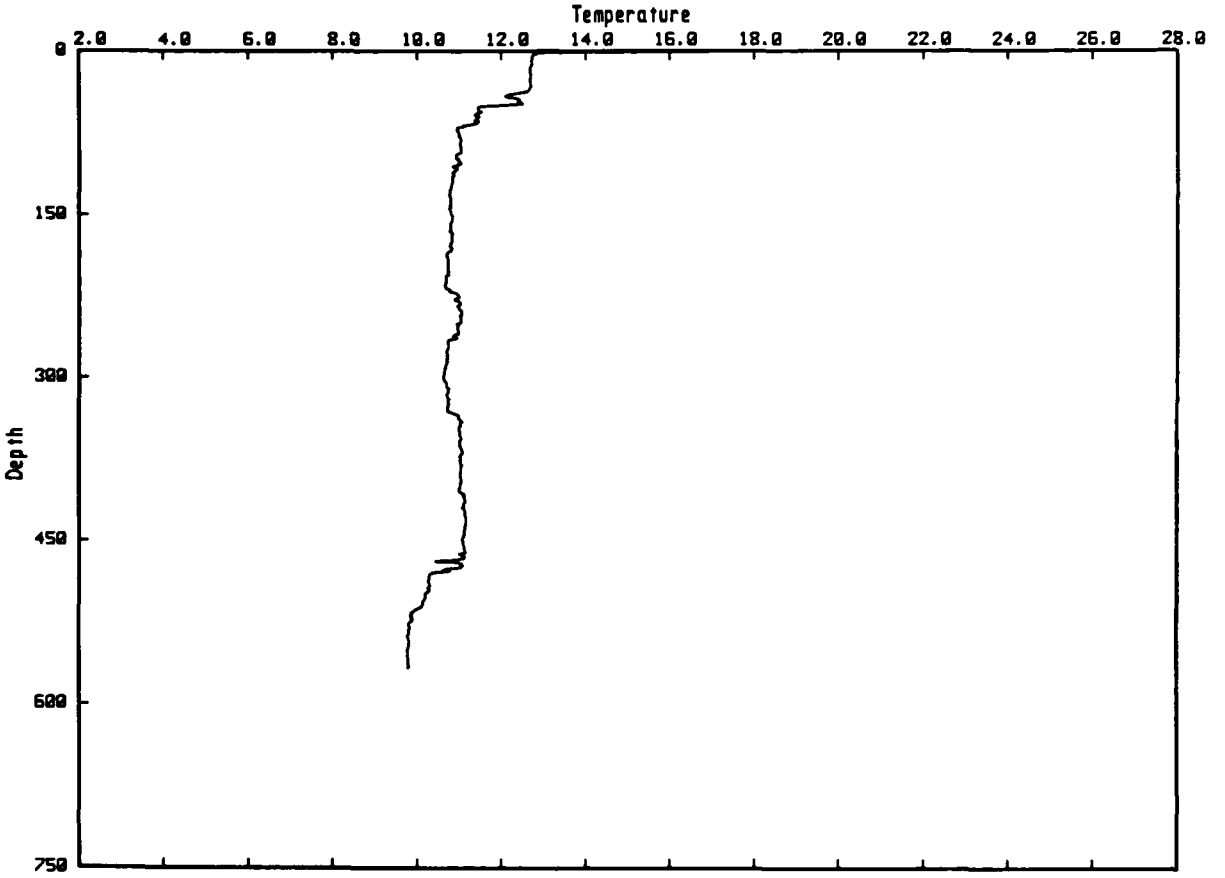
XBT DROP 205 28 34.2N 112 38.6W 9 MAR 85 0849 MST



XBT DROP 205 T-7 RADAR: SE 5.7nm 025T GULF COORDS: -28.2 236.1
JDAY 68 1549Z DEPTH 612m/612m SST 13.20 2M TEMPS: SAIL 13.12 XBT 13.41
GULF OF CALIFORNIA: MX3-5, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	13.4	200	12.6	390	11.7	580	8.7
20	13.0	210	12.7	400	11.7	590	8.7
30	12.9	220	12.5	410	11.7	600	8.7
40	12.8	230	12.5	420	11.7	610	8.7
50	12.8	240	12.4	430	11.7		
60	12.7	250	12.5	440	11.6		
70	12.8	260	12.0	450	11.6		
80	12.8	270	11.7	460	11.3		
90	12.8	280	11.7	470	10.8		
100	12.8	290	11.7	480	10.8		
110	12.8	300	11.7	490	10.7		
120	12.7	310	11.7	500	10.6		
130	12.7	320	11.7	510	10.6		
140	12.5	330	11.7	520	10.6		
150	12.4	340	11.7	530	10.3		
160	12.8	350	11.7	540	9.7		
170	12.6	360	11.7	550	9.5		
180	12.6	370	11.7	560	8.8		
190	12.6	380	11.7	570	8.8		

XBT DROP 206 28 36.0N 112 38.7W 9 MAR 85 0901 MST



XBT DROP 206 T-7 RADAR: SE 4.3nm 037T GULF COORDS: -26.3 238.9
JDAY 68 1601Z DEPTH 567m/567m SST 12.93 2M TEMPS: SAIL 12.78 XBT 13.11
GULF OF CALIFORNIA: END MX3; MX3-6, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	12.7	200	10.7	390	11.0
20	12.7	210	10.7	400	11.0
30	12.7	220	10.8	410	11.1
40	12.2	230	11.0	420	11.1
50	12.1	240	11.1	430	11.2
60	11.5	250	11.0	440	11.1
70	11.0	260	11.0	450	11.1
80	11.0	270	10.7	460	11.2
90	11.0	280	10.7	470	10.8
100	11.0	290	10.7	480	10.3
110	10.9	300	10.6	490	10.3
120	10.8	310	10.8	500	10.2
130	10.8	320	10.8	510	10.1
140	10.8	330	10.7	520	9.9
150	10.8	340	11.1	530	9.8
160	10.8	350	11.0	540	9.8
170	10.8	360	11.0	550	9.8
180	10.8	370	11.0	560	9.8
190	10.7	380	11.1		

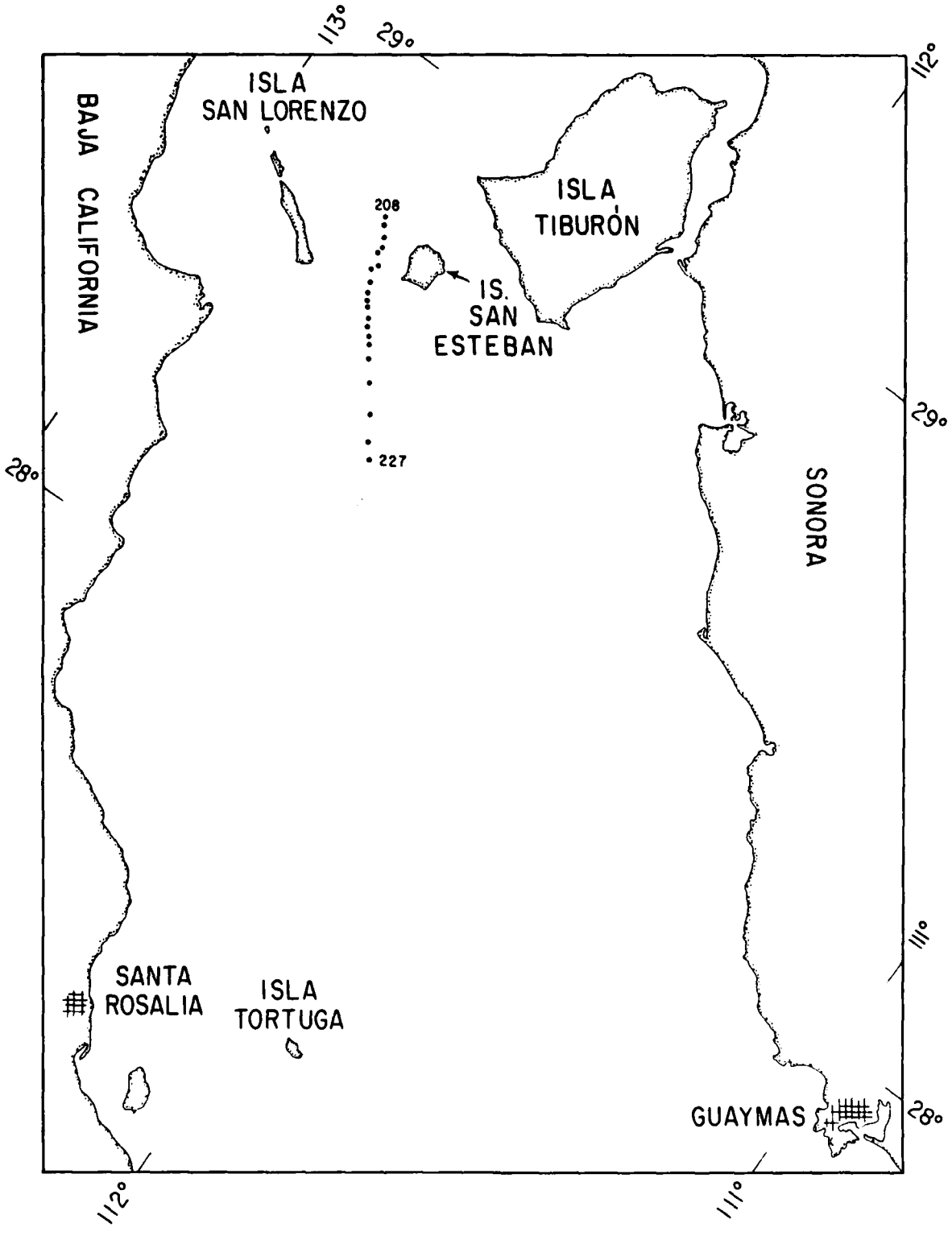
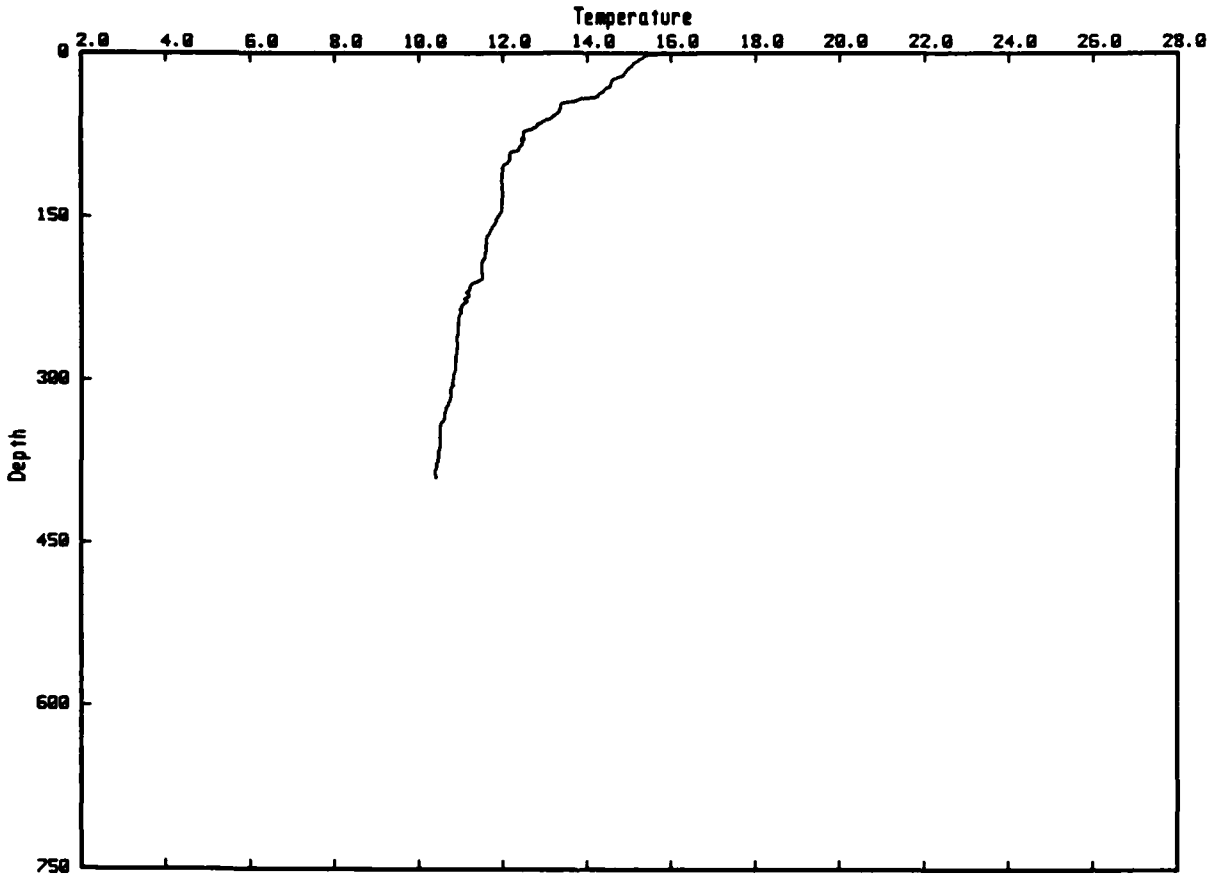


Figure 25. CAP3 Section: XBT Station Locations

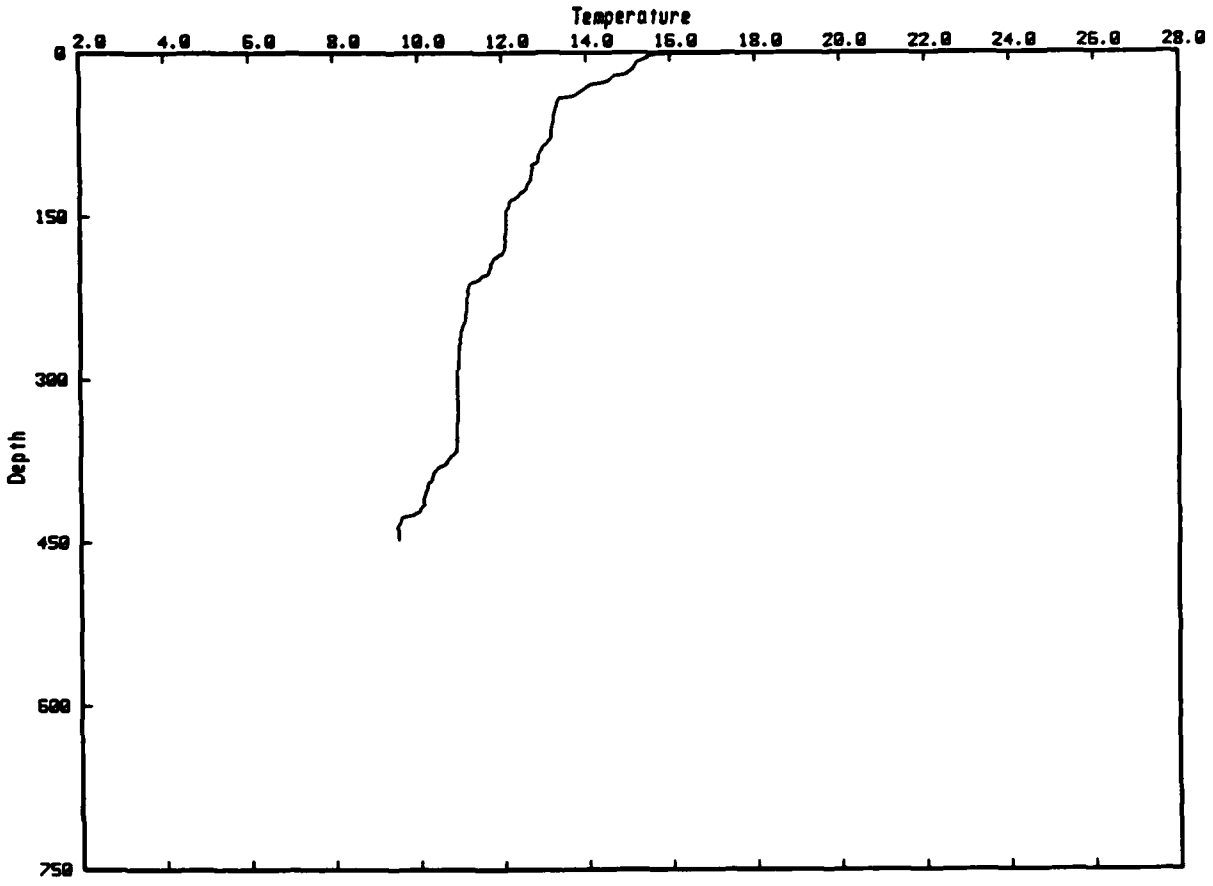
XBT DROP 208 28 44.3N 112 42.1W 9 MAR 85 2105 MST



XBT DROP 208 T-7 RADAR: SE 7.2nm 131T GULF COORDS: -21.7 254.5
JDAY 69 405Z DEPTH 410m/390m SST 15.39 2M TEMPS: SAIL 15.16 XBT 15.48
GULF OF CALIFORNIA: BEGIN CAP SILL LINE, CX3-1, SPRING TIDE

Z	TEMP	Z	TEMP	Z	TEMP
10	15.1	200	11.5	390	10.4
20	14.9	210	11.3		
30	14.6	220	11.2		
40	14.2	230	11.0		
50	13.4	240	11.0		
60	13.1	250	10.9		
70	12.7	260	10.9		
80	12.5	270	10.9		
90	12.3	280	10.9		
100	12.1	290	10.9		
110	12.0	300	10.8		
120	12.0	310	10.8		
130	12.0	320	10.7		
140	12.0	330	10.6		
150	11.9	340	10.5		
160	11.7	350	10.5		
170	11.6	360	10.5		
180	11.6	370	10.5		
190	11.5	380	10.4		

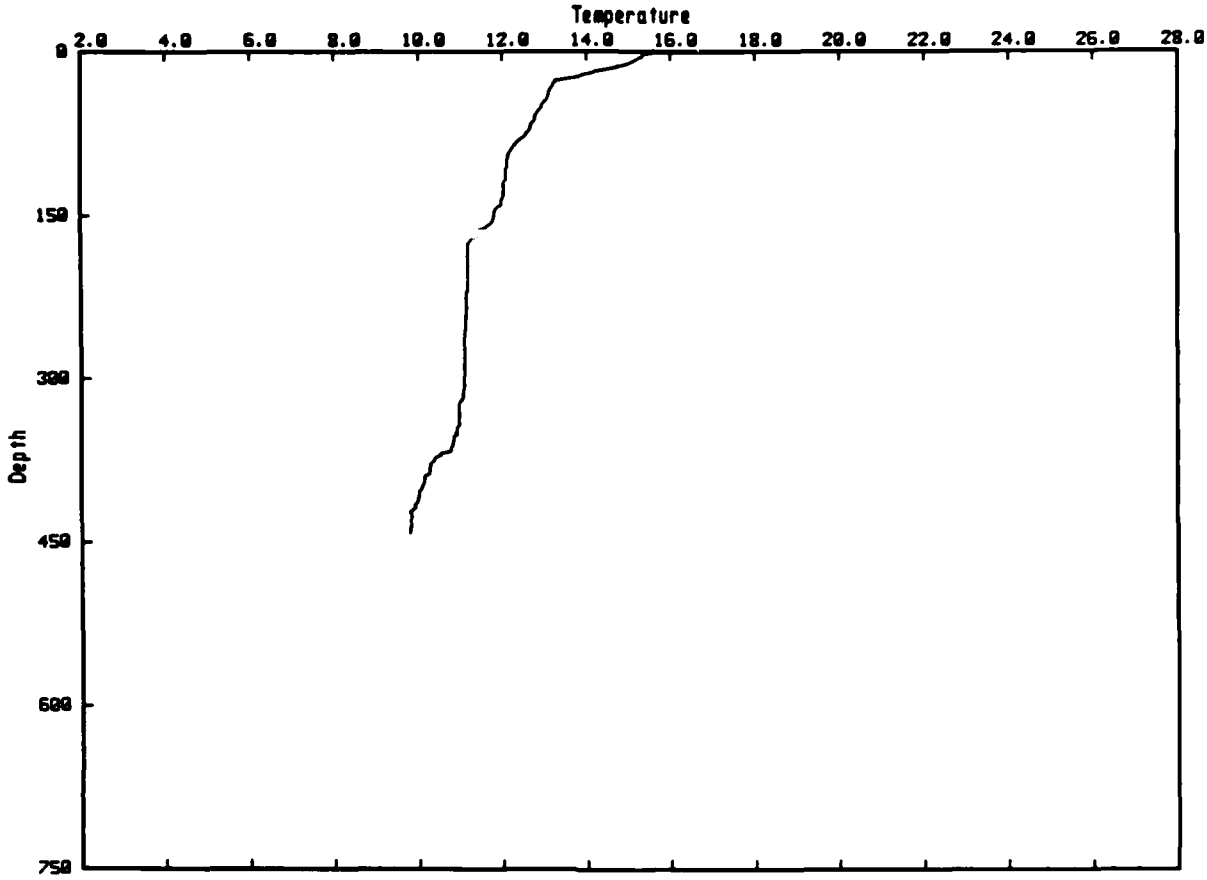
XBT DROP 209 28 43.5N 112 41.5W 9 MAR 85 2119 MST



XBT DROP 209 T-7 RADAR: SE 6.2nm 127T GULF COORDS: -21.8 252.8
JDAY 69 419Z DEPTH 449m/449m SST .00 2M TEMPS: SAIL 15.07 XBT 15.67
GULF OF CALIFORNIA: SILL LINE, CX3-2

Z	TEMP	Z	TEMP	Z	TEMP
10	15.2	200	11.7	390	10.3
20	14.9	210	11.3	400	10.2
30	14.1	220	11.2	410	10.1
40	13.7	230	11.1	420	10.0
50	13.3	240	11.1	430	9.6
60	13.2	250	11.1	440	9.5
70	13.2	260	11.0		
80	13.1	270	11.0		
90	12.9	280	11.0		
100	12.9	290	10.9		
110	12.7	300	10.9		
120	12.6	310	10.9		
130	12.4	320	10.9		
140	12.2	330	10.9		
150	12.1	340	10.9		
160	12.1	350	10.9		
170	12.1	360	10.9		
180	12.0	370	10.8		
190	11.8	380	10.5		

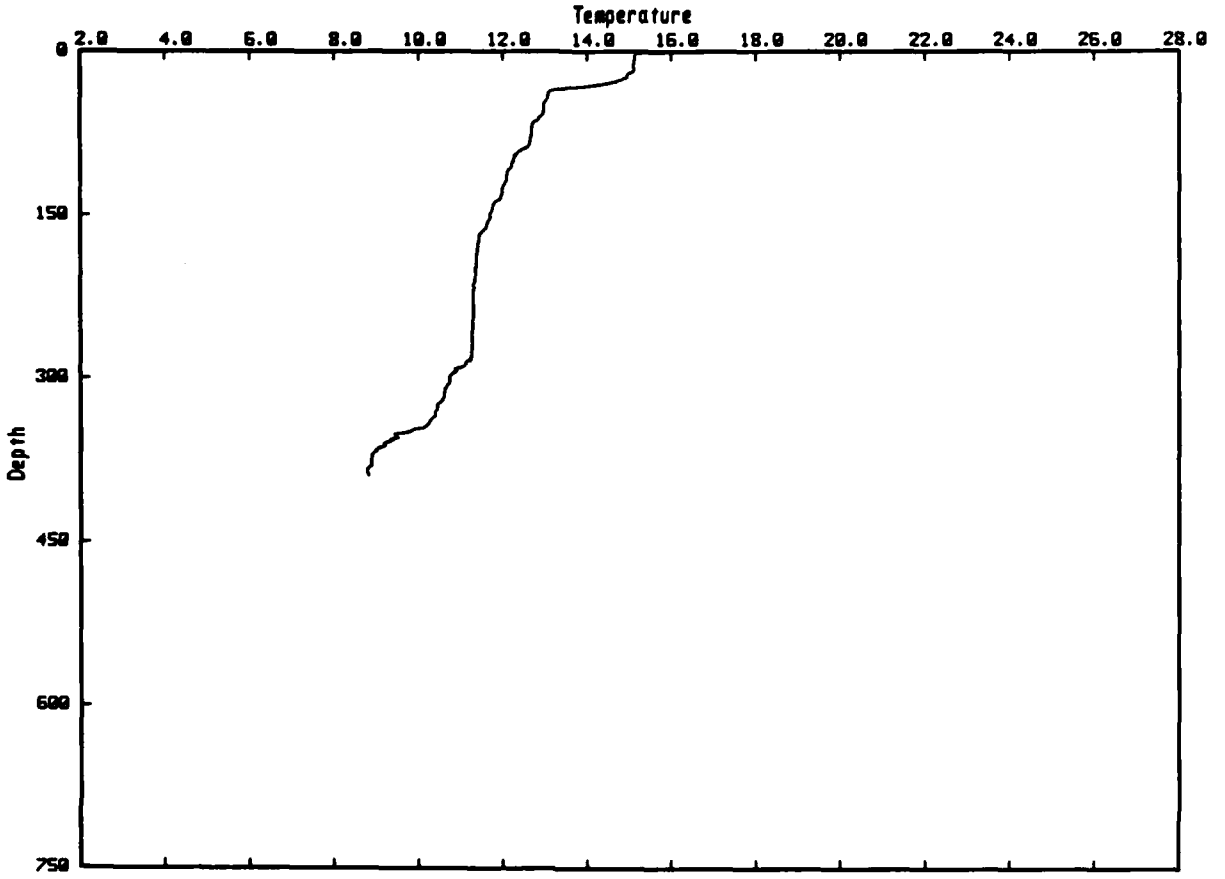
XBT DROP 210 28 42.4N 112 40.6W 9 MAR 85 2125 MST



XBT DROP 210 T-7 RADAR: SE 5.2nm 123T GULF COORDS: -21.8 250.2
JDAY 69 425Z DEPTH 456m/443m SST 15.39 2M TEMPS: SAIL 15.14 XBT 15.49
GULF OF CALIFORNIA: SILL LINE, CX3-3

Z	TEMP	Z	TEMP	Z	TEMP
10	15.1	200	11.2	390	10.1
20	14.1	210	11.2	400	10.1
30	13.2	220	11.1	410	10.0
40	13.1	230	11.1	420	9.9
50	12.9	240	11.1	430	9.8
60	12.8	250	11.1	440	9.8
70	12.7	260	11.1		
80	12.4	270	11.1		
90	12.2	280	11.1		
100	12.1	290	11.1		
110	12.1	300	11.1		
120	12.0	310	11.1		
130	12.0	320	11.0		
140	12.0	330	11.0		
150	11.8	340	11.0		
160	11.6	350	10.9		
170	11.4	360	10.8		
180	11.2	370	10.5		
190	11.2	380	10.3		

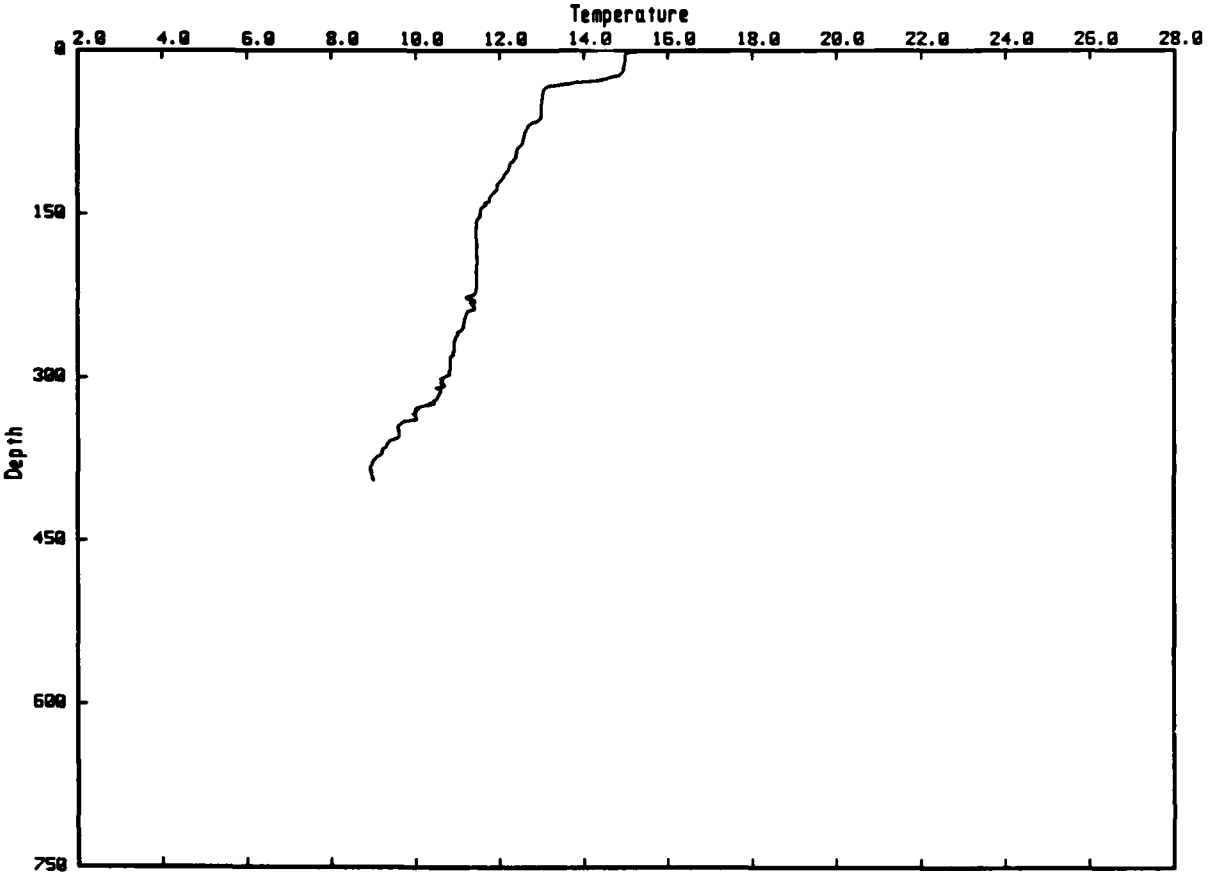
XBT DROP 211 28 41.4N 112 40.0W 9 MAR 85 2132 MST



XBT DROP 211 T-7 RADAR: SE 4.0nm 116T GULF COORDS: -22.1 248.2
JDAY 69 432Z DEPTH 394m/390m SST 15.17 2M TEMPS: SAIL 15.01 XBT 15.18
GULF OF CALIFORNIA: SILL LINE, CX3-4

Z	TEMP	Z	TEMP	Z	TEMP
10	15.1	200	11.3	390	8.8
20	15.0	210	11.3		
30	14.4	220	11.3		
40	13.1	230	11.3		
50	13.0	240	11.3		
60	12.9	250	11.3		
70	12.7	260	11.3		
80	12.7	270	11.3		
90	12.5	280	11.2		
100	12.2	290	11.0		
110	12.1	300	10.7		
120	12.0	310	10.6		
130	12.0	320	10.6		
140	11.8	330	10.4		
150	11.7	340	10.3		
160	11.6	350	9.7		
170	11.4	360	9.2		
180	11.4	370	8.9		
190	11.4	380	8.9		

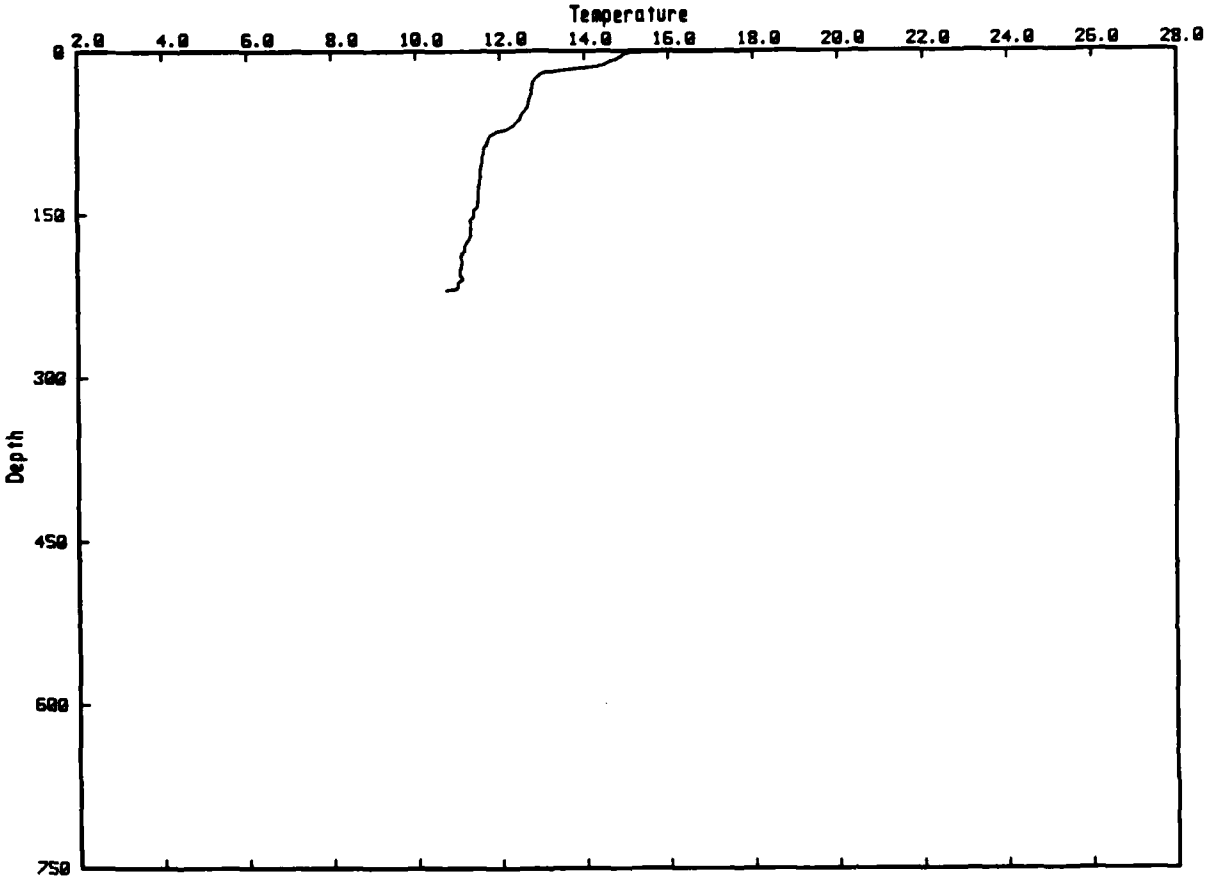
XBT DROP 212 28 40.6N 112 40.0W 9 MAR 85 2138 MST



XBT DROP 212 T-7 RADAR: SE 3.7nm 105T GULF COORDS: -23.0 247.0
JDAY 69 438Z DEPTH 396m/396m SST 15.00 2M TEMPS: SAIL 14.79 XBT 15.10
GULF OF CALIFORNIA: SILL LINE, CX3-5

Z	TEMP	Z	TEMP	Z	TEMP
10	15.0	200	11.4	390	9.0
20	14.9	210	11.5		
30	13.8	220	11.4		
40	13.0	230	11.4		
50	13.0	240	11.3		
60	13.0	250	11.2		
70	12.7	260	11.0		
80	12.6	270	10.9		
90	12.4	280	10.9		
100	12.3	290	10.8		
110	12.2	300	10.7		
120	12.0	310	10.6		
130	11.9	320	10.5		
140	11.7	330	10.0		
150	11.5	340	9.7		
160	11.5	350	9.6		
170	11.5	360	9.3		
180	11.5	370	9.2		
190	11.5	380	9.0		

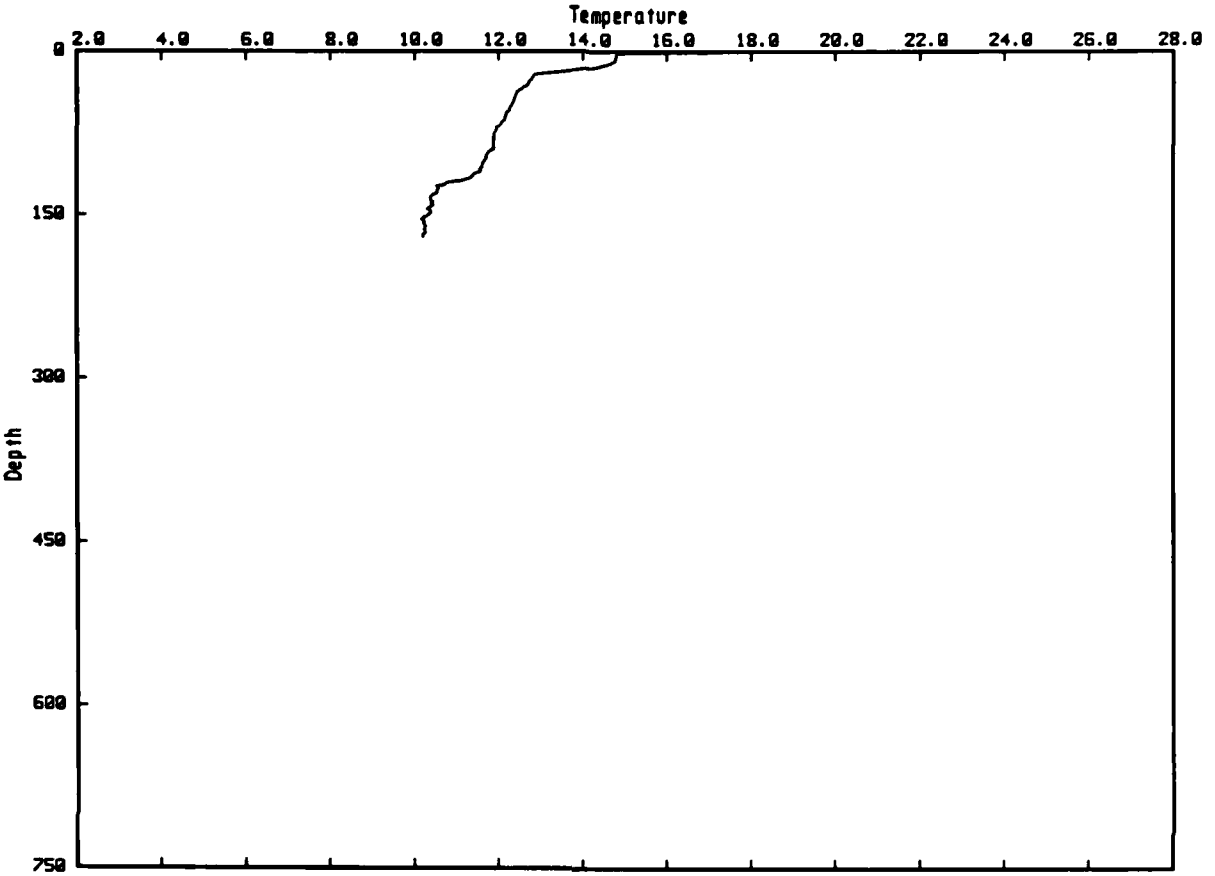
XBT DROP 213 28 39.6N 112 39.0W 9 MAR 85 2145 MST



XBT DROP 213 T-7 RADAR: SE 3.7nm 085T GULF COORDS: -22.8 244.5
JDAY 69 445Z DEPTH 220m/220m SST 14.98 2M TEMPS: SAIL 14.78 XBT 15.14
GULF OF CALIFORNIA: SILL LINE, CX3-6

Z	TEMP	Z	TEMP
10	14.6	200	11.0
20	13.0	210	11.1
30	12.8	220	10.8
40	12.7		
50	12.7		
60	12.5		
70	12.3		
80	11.7		
90	11.6		
100	11.6		
110	11.5		
120	11.5		
130	11.5		
140	11.5		
150	11.4		
160	11.3		
170	11.3		
180	11.2		
190	11.1		

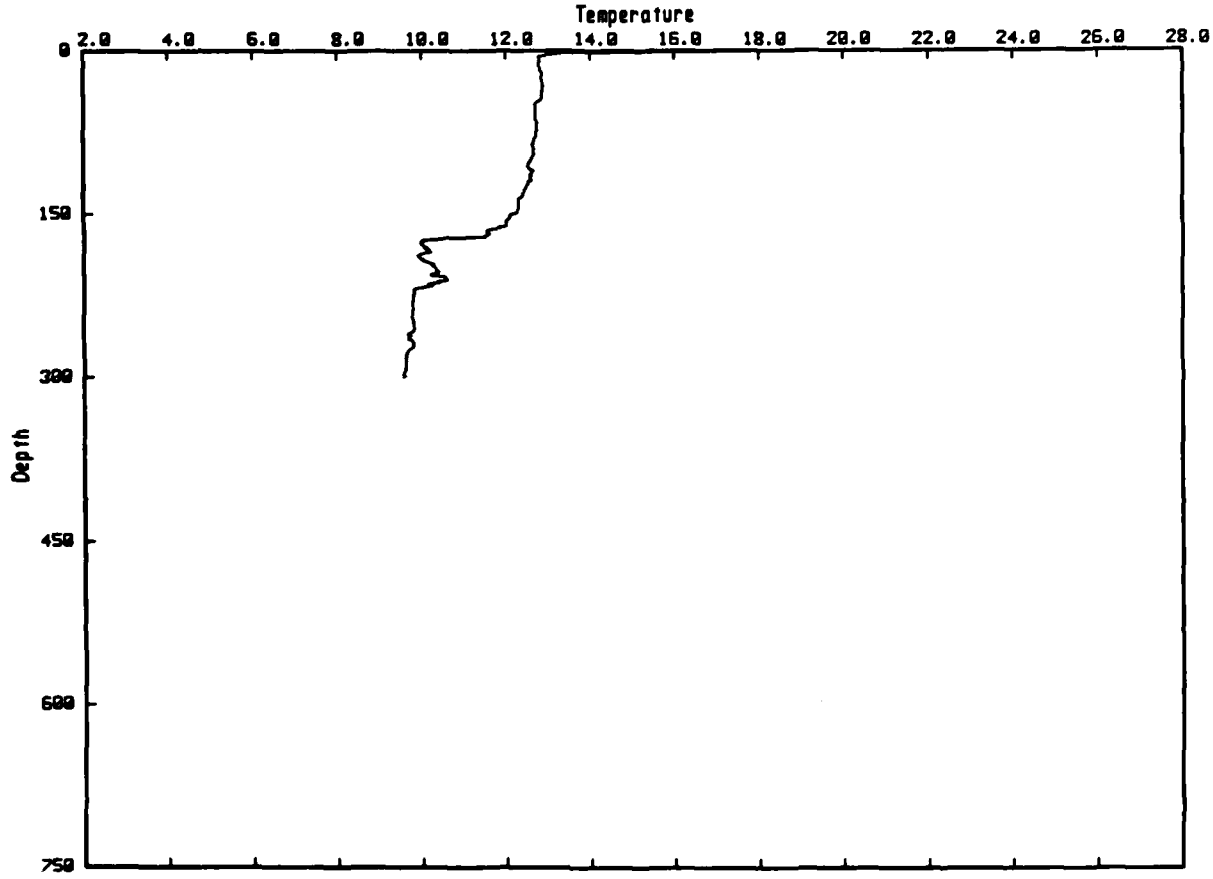
XBT DROP 214 28 38.8N 112 39.5W 9 MAR 85 2150 MST



XBT DROP 214 T-7 RADAR: SE 3.2nm 070T GULF COORDS: -24.3 243.8
JDAY 69 450Z DEPTH 170m/170m SST 14.79 2M TEMPS: SAIL 14.67 XBT 14.85
GULF OF CALIFORNIA: SILL LINE, CX3-7

Z	TEMP
10	14.7
20	13.1
30	12.7
40	12.4
50	12.3
60	12.1
70	12.0
80	11.9
90	11.9
100	11.7
110	11.6
120	10.9
130	10.5
140	10.4
150	10.3
160	10.3
170	10.2

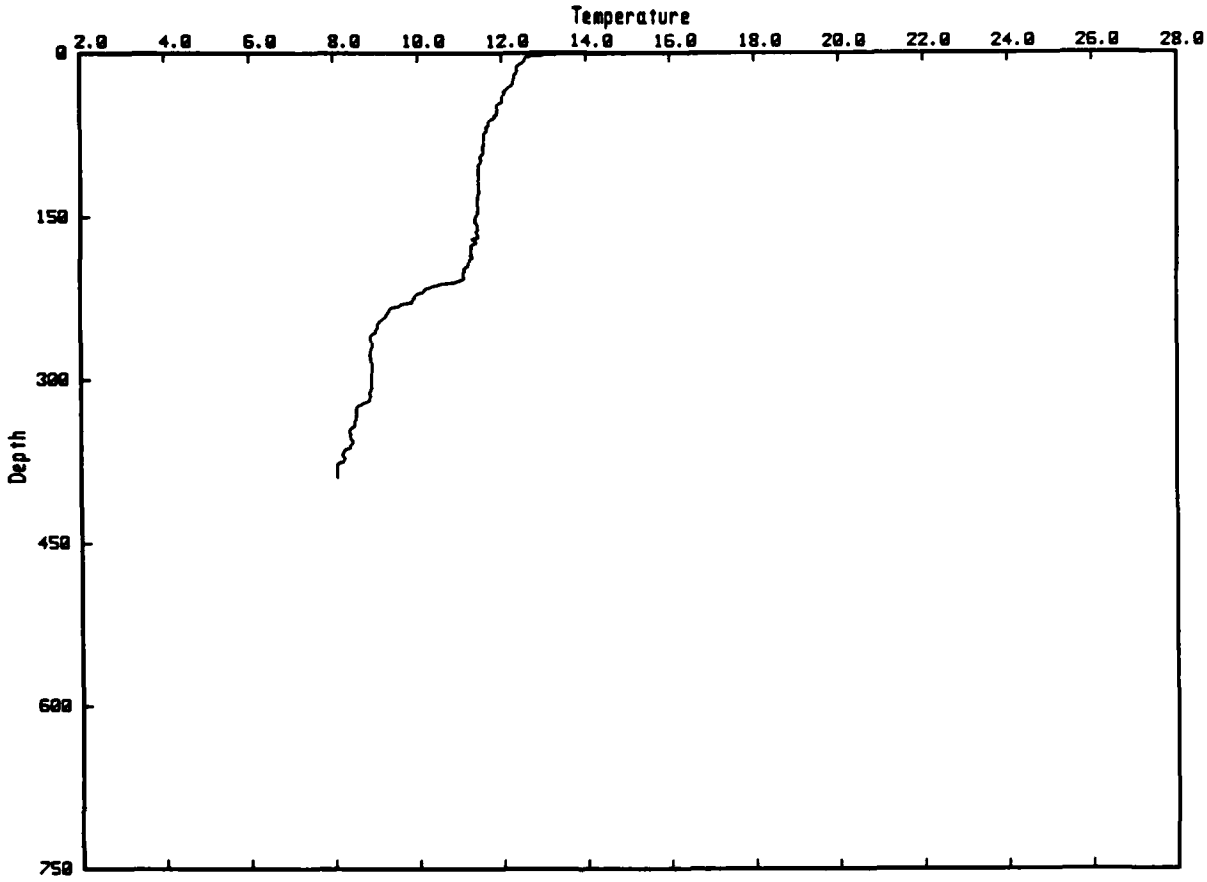
XBT DROP 215 28 37.6N 112 38.5W 9 MAR 85 2159 MST



XBT DROP 215 T-7 RADAR: SE 3.0nm 047T GULF COORDS: -24.3 241.1
JDAY 69 459Z DEPTH 300m/300m SST 13.29 2M TEMPS: SAIL 13.33 XBT 13.71
GULF OF CALIFORNIA: SILL LINE, CX3-8

Z	TEMP	Z	TEMP
10	12.8	200	10.3
20	12.9	210	10.5
30	12.9	220	9.8
40	12.9	230	9.8
[illegible]	12.7	[illegible]	9.8
60	12.7	250	9.8
70	12.7	260	9.7
80	12.7	270	9.8
90	12.7	280	9.6
100	12.6	290	9.6
110	12.6	300	9.6
120	12.6		
130	12.4		
140	12.3		
150	12.2		
160	12.0		
170	11.5		
180	10.0		
190	9.9		

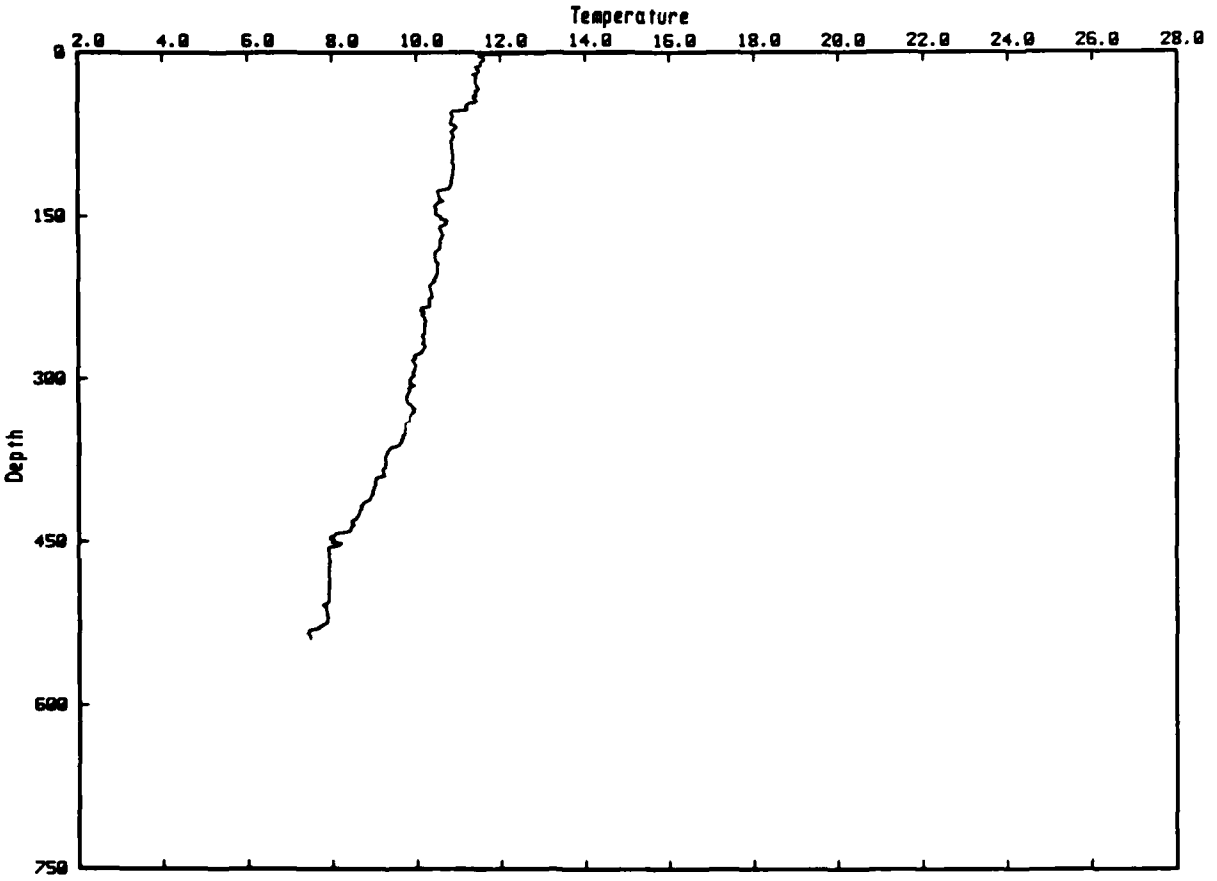
XBT DROP 216 28 36.6N 112 38.0W 9 MAR 85 2204 MST



XBT DROP 216 T-7 RADAR: SE 3.4nm 031T GULF COORDS: -24.7 239.1
JDAY 69 504Z DEPTH 390m/390m SST 12.65 2M TEMPS: SAIL 12.43 XBT 13.48
GULF OF CALIFORNIA: SILL LINE, CX3-9

Z	TEMP	Z	TEMP	Z	TEMP
10	12.5	200	11.1	390	8.1
20	12.3	210	10.9		
30	12.2	220	10.1		
40	12.0	230	9.7		
50	11.9	240	9.3		
60	11.8	250	9.1		
70	11.8	260	8.9		
80	11.8	270	8.9		
90	11.5	280	8.9		
100	11.5	290	8.9		
110	11.4	300	8.9		
120	11.4	310	8.9		
130	11.4	320	8.8		
140	11.4	330	8.5		
150	11.4	340	8.5		
160	11.4	350	8.4		
170	11.3	360	8.4		
180	11.3	370	8.2		
190	11.2	380	8.1		

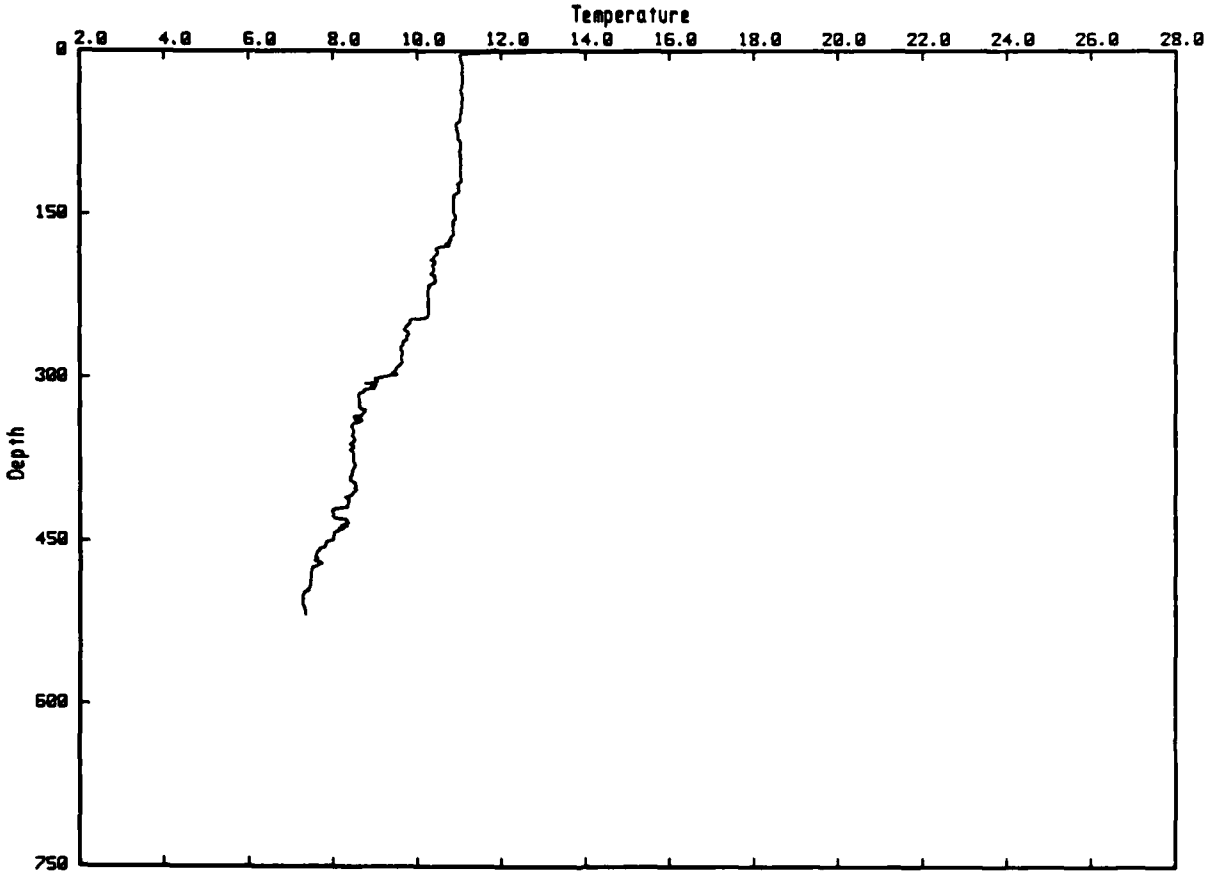
XBT DROP 217 28 35.9N 112 37.5W 9 MAR 85 2210 MST



XBT DROP 217 T-7 RADAR: SE 3.7nm 021T GULF COORDS: -24.8 237.6
JDAY 69 510Z DEPTH 539m/539m SST 11.75 2M TEMPS: SAIL 11.69 XBT 11.69
GULF OF CALIFORNIA: SILL LINE, CX3-10

Z	TEMP	Z	TEMP	Z	TEMP
10	11.5	200	10.5	390	9.1
20	11.4	210	10.4	400	9.0
30	11.4	220	10.4	410	8.9
40	11.3	230	10.3	420	8.7
50	11.2	240	10.2	430	8.5
60	10.8	250	10.2	440	8.4
70	10.9	260	10.1	450	8.0
80	10.8	270	10.2	460	7.9
90	10.9	280	10.0	470	7.9
100	10.8	290	10.0	480	7.9
110	10.9	300	9.9	490	7.9
120	10.8	310	9.8	500	7.9
130	10.5	320	9.8	510	7.8
140	10.5	330	9.9	520	7.9
150	10.5	340	9.7	530	7.7
160	10.6	350	9.7		
170	10.6	360	9.6		
180	10.5	370	9.3		
190	10.4	380	9.3		

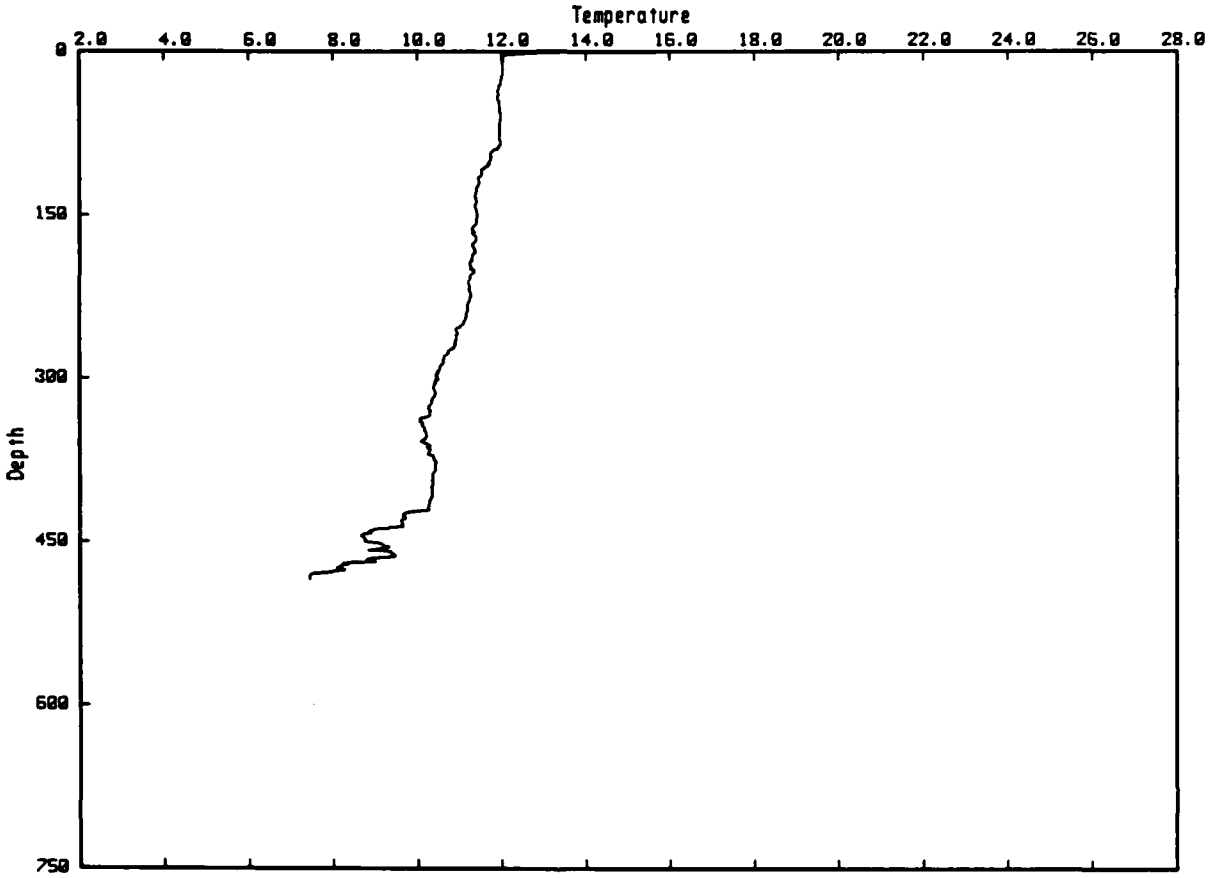
XBT DROP 218 28 35.4N 112 37.0W 9 MAR 85 2216 MST



XBT DROP 218 T-7 RADAR: SE 4.2nm 012T GULF COORDS: -24.7 236.3
JDAY 69 516Z DEPTH 519m/519m SST 11.24 2M TEMPS: SAIL 11.19 XBT 11.60
GULF OF CALIFORNIA: SILL LINE, CX3-11

Z	TEMP	Z	TEMP	Z	TEMP
10	11.0	200	10.4	390	8.4
20	11.1	210	10.4	400	8.5
30	11.1	220	10.3	410	8.3
40	11.1	230	10.3	420	8.2
50	11.1	240	10.3	430	8.3
60	11.0	250	9.8	440	8.1
70	10.9	260	9.8	450	7.9
80	11.0	270	9.7	460	7.6
90	11.0	280	9.6	470	7.7
100	11.0	290	9.5	480	7.5
110	11.0	300	9.2	490	7.5
120	11.1	310	9.0	500	7.3
130	10.9	320	8.6	510	7.3
140	10.9	330	8.8		
150	10.9	340	8.6		
160	10.8	350	8.5		
170	10.8	360	8.4		
180	10.6	370	8.5		
190	10.4	380	8.5		

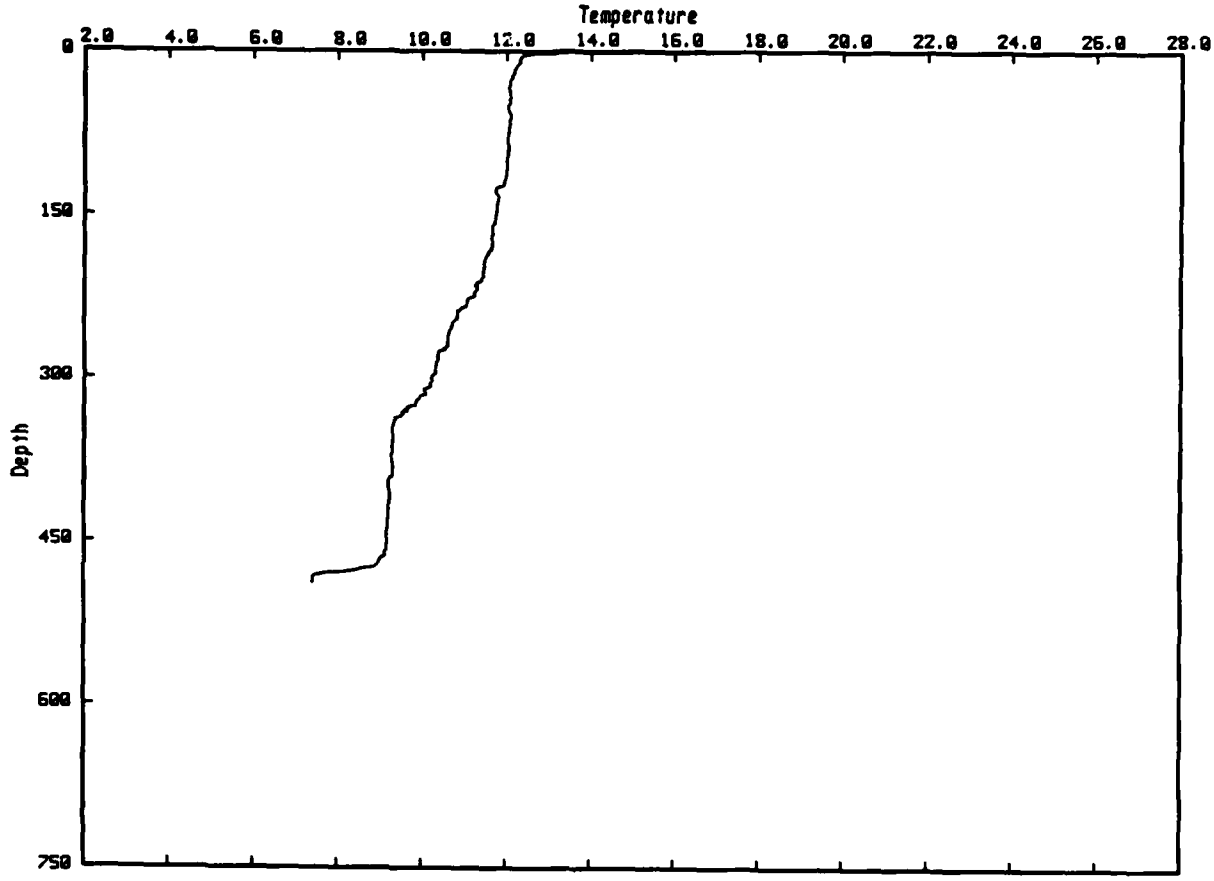
XBT DROP 219 28 34.5N 112 36.0W 9 MAR 85 2222 MST



XBT DROP 219 T-7 RADAR: SE 4.9nm 001T GULF COORDS: -24.4 234.0
JDAY 69 522Z DEPTH 485m/485m SST 12.17 2M TEMPS: SAIL 11.89 XBT 12.69
GULF OF CALIFORNIA: SILL LINE, CX3-12

Z	TEMP	Z	TEMP	Z	TEMP
10	12.0	200	11.3	390	10.4
20	12.0	210	11.2	400	10.3
30	12.0	220	11.2	410	10.3
40	11.9	230	11.2	420	10.3
50	12.0	240	11.2	430	9.6
60	12.0	250	11.1	440	8.9
70	12.0	260	10.9	450	8.8
80	12.0	270	10.9	460	9.4
90	11.9	280	10.6	470	8.2
100	11.7	290	10.5	480	7.5
110	11.5	300	10.5		
120	11.5	310	10.4		
130	11.4	320	10.3		
140	11.4	330	10.3		
150	11.4	340	10.1		
160	11.4	350	10.2		
170	11.4	360	10.2		
180	11.3	370	10.3		
190	11.3	380	10.4		

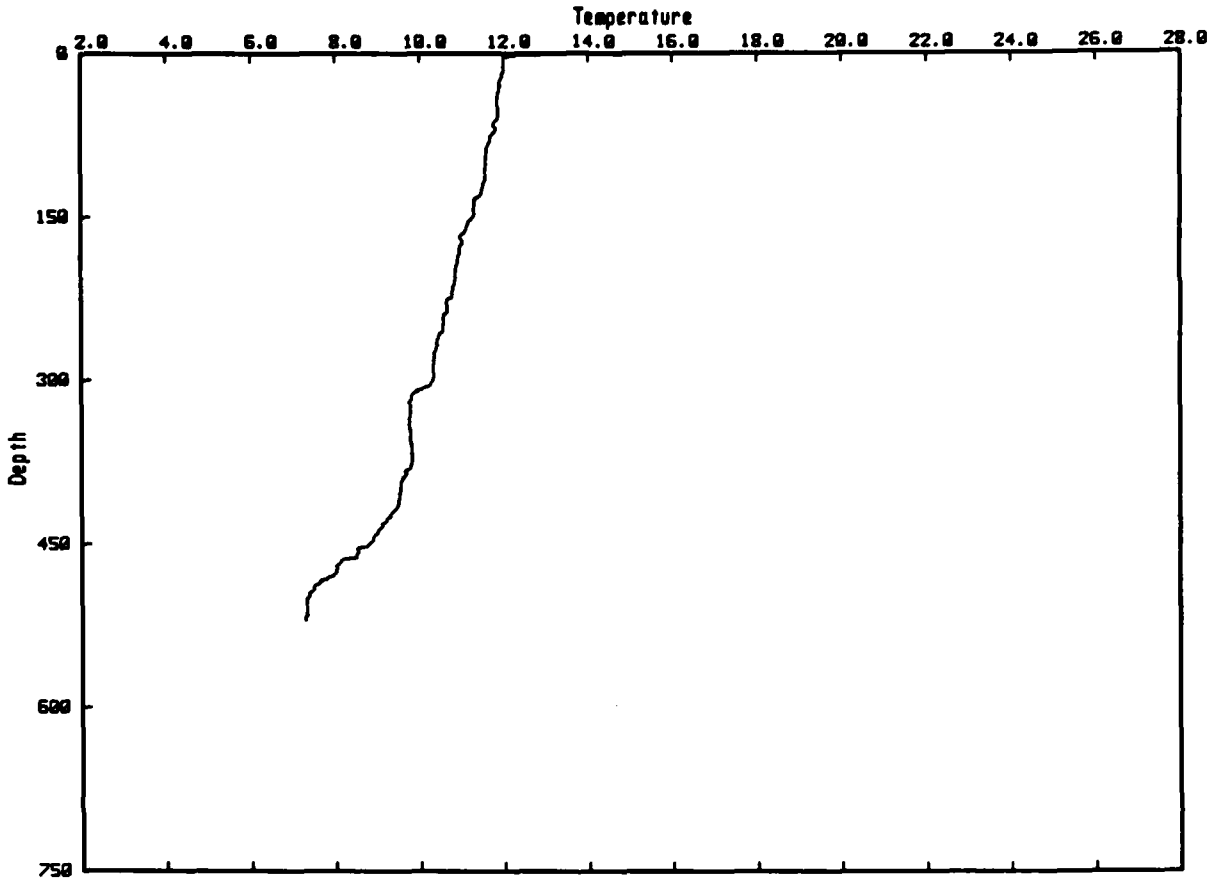
XBT DROP 220 28 33.7N 112 35.5W 9 MAR 85 2228 MST



XBT DROP 220 T-7 RADAR: SE 5.6nm 354T GULF COORDS: -24.6 232.4
JDAY 69 528Z DEPTH 489m/489m SST 12.46 2M TEMPS: SAIL 12.10 XBT 12.88
GULF OF CALIFORNIA: SILL LINE, CX3-13

Z	TEMP	Z	TEMP	Z	TEMP
10	12.3	200	11.5	390	9.3
20	12.2	210	11.4	400	9.2
30	12.1	220	11.3	410	9.3
40	12.1	230	11.1	420	9.2
50	12.0	240	10.8	430	9.2
60	12.1	250	10.7	440	9.2
70	12.1	260	10.6	450	9.2
80	12.0	270	10.6	460	9.1
90	12.1	280	10.4	470	9.0
100	12.0	290	10.3	480	7.6
110	12.0	300	10.2		
120	11.9	310	10.1		
130	11.8	320	9.9		
140	11.8	330	9.6		
150	11.7	340	9.3		
160	11.7	350	9.3		
170	11.6	360	9.3		
180	11.6	370	9.3		
190	11.5	380	9.3		

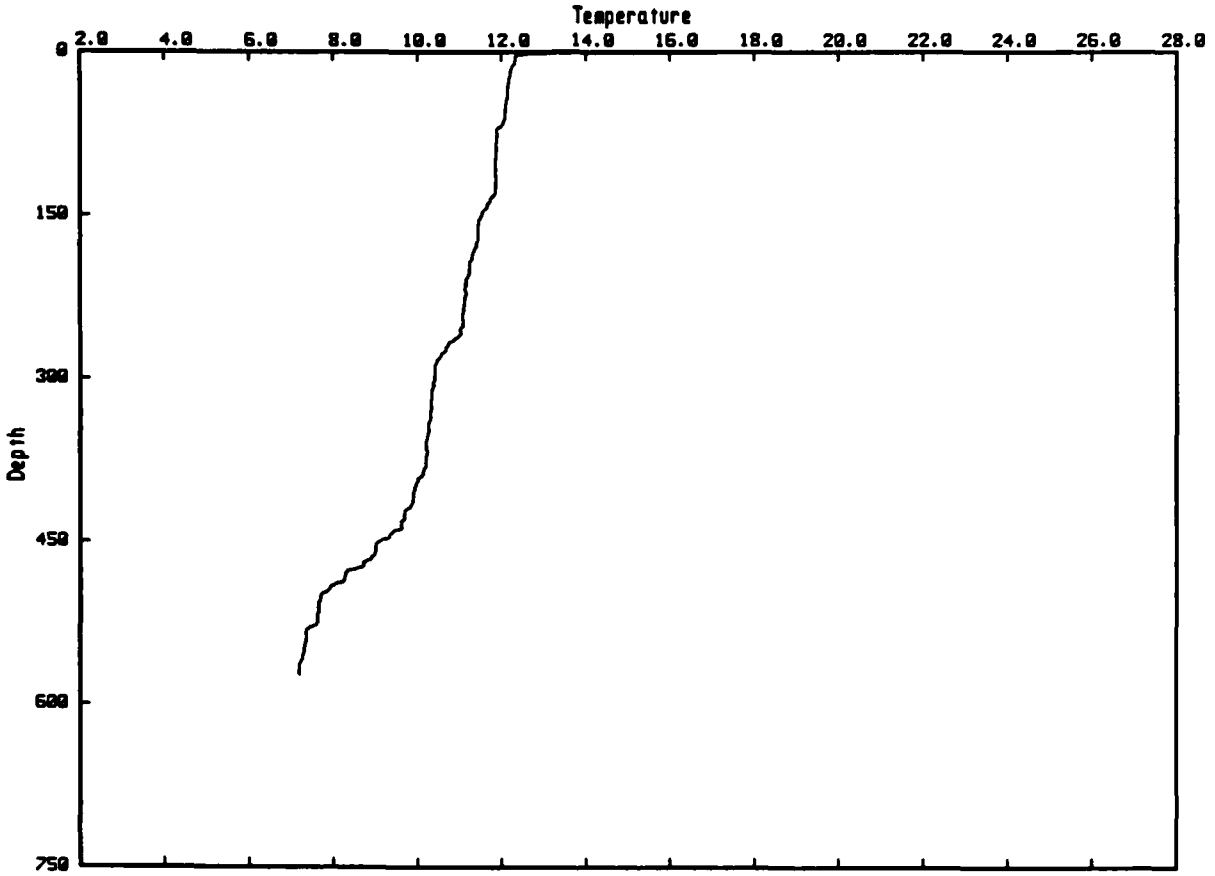
XBT DROP 221 28 33.0N 112 34.6W 9 MAR 85 2234 MST



XBT DROP 221 T-7 RADAR: SE 6.6nm 350T GULF COORDS: -24.2 230.5
JDAY 69 534Z DEPTH 520m/520m SST 12.18 2M TEMPS: SAIL 11.96 XBT 12.37
GULF OF CALIFORNIA: SILL LINE, CX3-14

Z	TEMP	Z	TEMP	Z	TEMP
10	12.0	200	10.9	390	9.6
20	12.0	210	10.8	400	9.6
30	11.9	220	10.8	410	9.5
40	11.9	230	10.6	420	9.4
50	11.9	240	10.6	430	9.2
60	11.9	250	10.6	440	9.0
70	11.8	260	10.4	450	8.8
80	11.7	270	10.4	460	8.5
90	11.6	280	10.4	470	8.0
100	11.6	290	10.3	480	7.8
110	11.6	300	10.3	490	7.5
120	11.5	310	9.9	500	7.3
130	11.4	320	9.8	510	7.3
140	11.3	330	9.8	520	7.3
150	11.3	340	9.7		
160	11.1	350	9.8		
170	11.0	360	9.8		
180	10.9	370	9.8		
190	10.9	380	9.8		

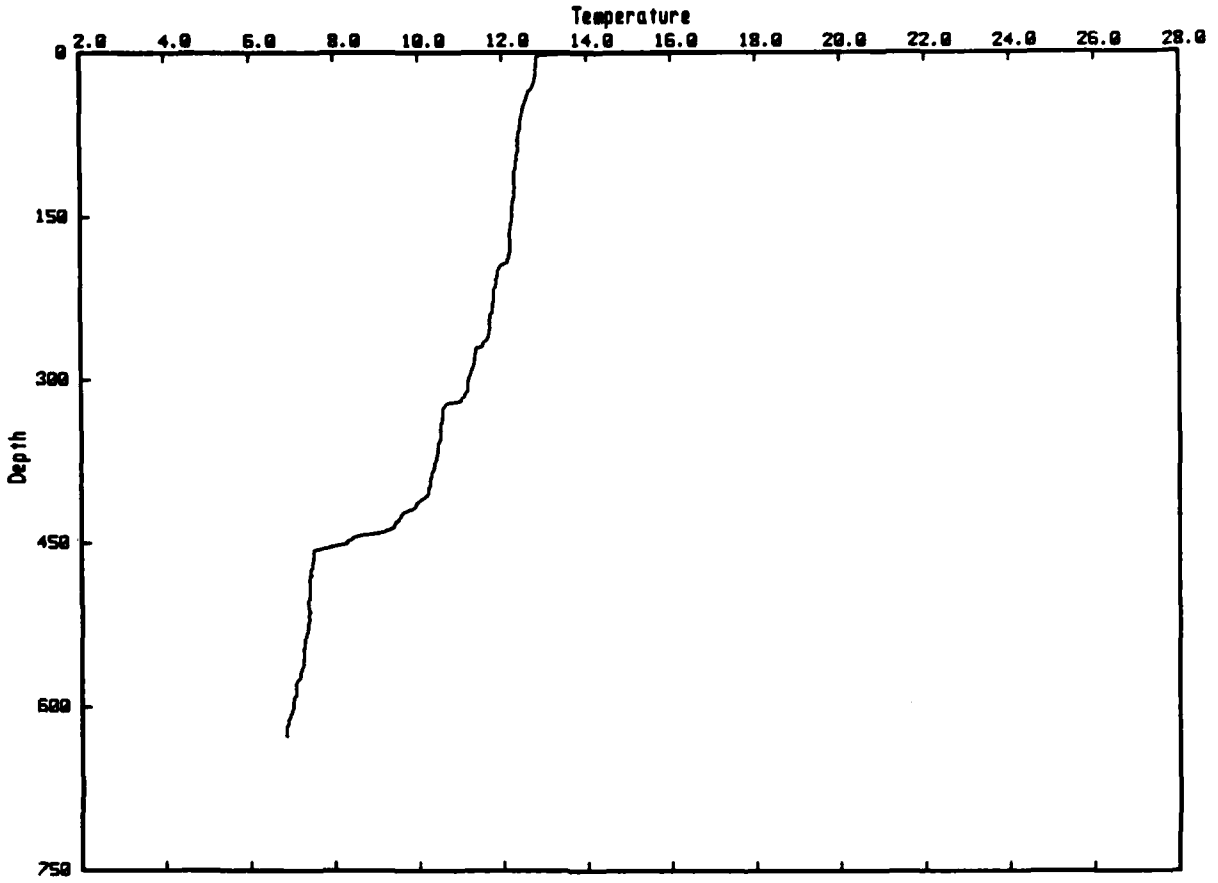
XBT DROP 222 28 32.3N 112 34.0W 9 MAR 85 2240 MST



XBT DROP 222 T-7 RADAR: SE 7.5nm 346T GULF COORDS: -24.1 228.8
JDAY 69 540Z DEPTH 574m/574m SST 12.52 2M TEMPS: SAIL 12.28 XBT 12.66
GULF OF CALIFORNIA: SILL LINE, CX3-15

Z	TEMP	Z	TEMP	Z	TEMP
10	12.3	200	11.2	390	10.1
20	12.2	210	11.2	400	9.9
30	12.2	220	11.1	410	9.9
40	12.1	230	11.1	420	9.8
50	12.1	240	11.1	430	9.7
60	12.1	250	11.1	440	9.4
70	11.9	260	11.0	450	9.1
80	11.9	270	10.7	460	9.0
90	11.9	280	10.5	470	8.7
100	11.9	290	10.4	480	8.3
110	11.9	300	10.4	490	8.0
120	11.9	310	10.3	500	7.7
130	11.8	320	10.3	510	7.6
140	11.7	330	10.3	520	7.6
150	11.5	340	10.3	530	7.4
160	11.4	350	10.3	540	7.4
170	11.4	360	10.2	550	7.3
180	11.4	370	10.2	560	7.2
190	11.3	380	10.2	570	7.2

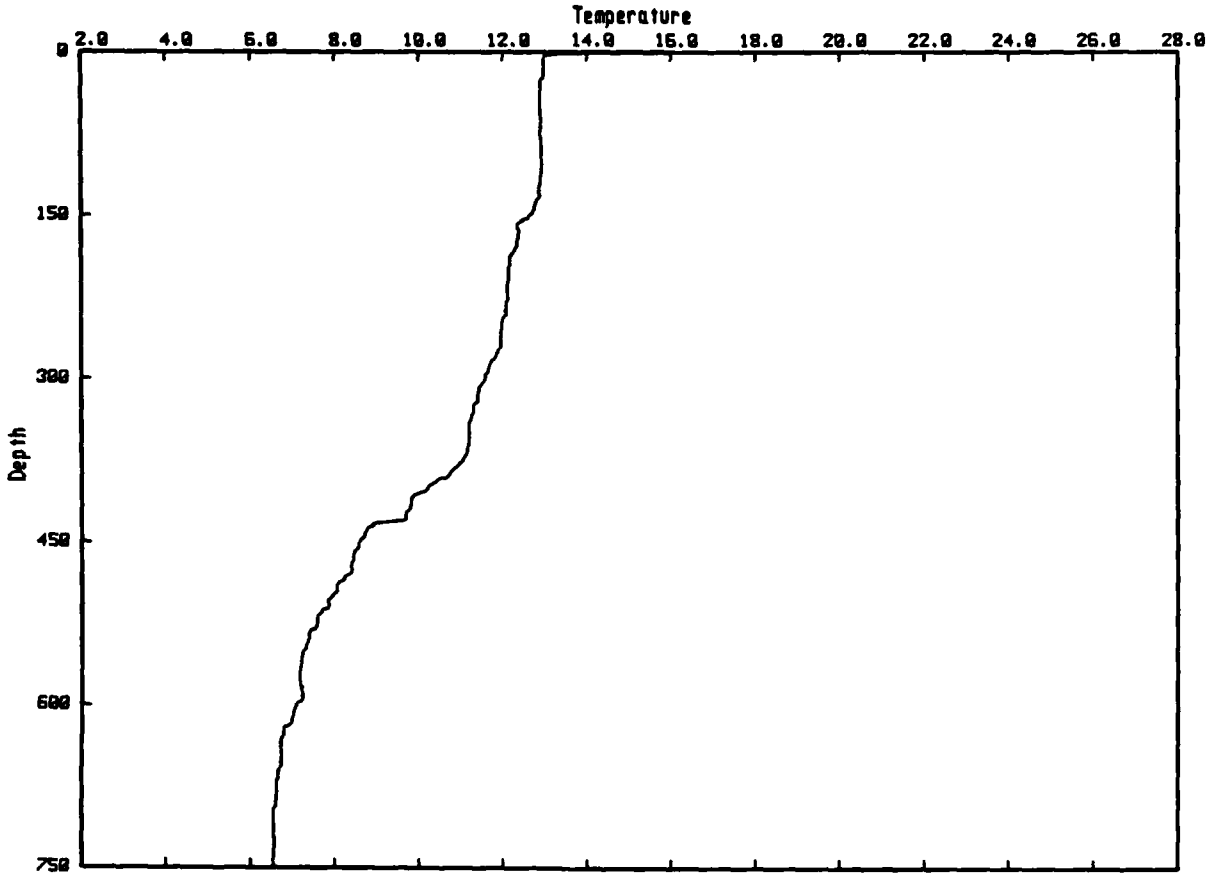
XBT DROP 223 28 31.0N 112 33.0W 9 MAR 85 2248 MST



XBT DROP 223 T-7 RADAR: SE 8.8nm 344T GULF COORDS: -24.2 225.9
JDAY 69 548Z DEPTH 627m/627m SST 12.89 2M TEMPS: SAIL 12.62 XBT 13.43
GULF OF CALIFORNIA: SILL LINE, CX3-16

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	12.8	200	11.9	390	10.3	580	7.1
20	12.8	210	11.8	400	10.2	590	7.1
30	12.7	220	11.8	410	10.1	600	7.0
40	12.6	230	11.8	420	9.8	610	6.9
50	12.5	240	11.7	430	9.5	620	6.8
60	12.4	250	11.7	440	9.1		
70	12.4	260	11.7	450	8.3		
80	12.4	270	11.5	460	7.5		
90	12.4	280	11.3	470	7.5		
100	12.3	290	11.3	480	7.4		
110	12.3	300	11.2	490	7.4		
120	12.3	310	11.1	500	7.4		
130	12.3	320	10.9	510	7.4		
140	12.2	330	10.6	520	7.4		
150	12.2	340	10.5	530	7.3		
160	12.2	350	10.5	540	7.3		
170	12.2	360	10.4	550	7.3		
180	12.2	370	10.4	560	7.3		
190	12.1	380	10.4	570	7.2		

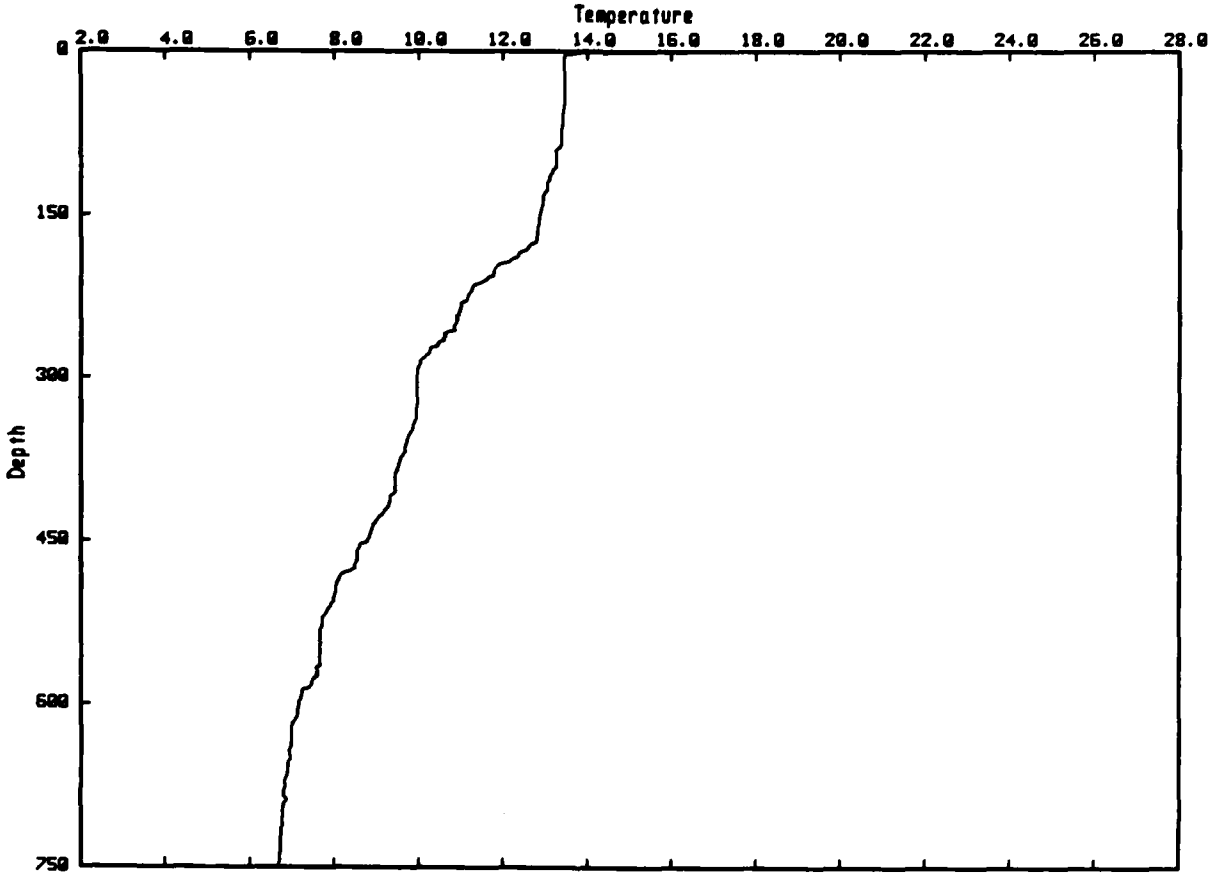
XBT DROP 224 28 29.0N 112 31.1W 9 MAR 85 2306 MST



XBT DROP 224 T-7 RADAR: SE 11.4nm 338T GULF COORDS: -23.9 221.1
JDAY 69 606Z DEPTH 828m/760m SST 13.08 2M TEMPS: SAIL 12.82 XBT 13.36
GULF OF CALIFORNIA: SILL LINE, CX3-17

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	13.0	200	12.1	390	10.7	580	7.2
20	13.0	210	12.1	400	10.2	590	7.2
30	12.9	220	12.1	410	9.8	600	7.1
40	12.9	230	12.1	420	9.8	610	7.0
50	12.9	240	12.1	430	9.6	620	6.8
60	12.9	250	12.0	440	8.7	630	6.7
70	12.9	260	12.0	450	8.6	640	6.7
80	12.9	270	12.0	460	8.5	650	6.7
90	12.9	280	11.8	470	8.4	660	6.7
100	12.9	290	11.7	480	8.3	670	6.6
110	12.9	300	11.6	490	8.0	680	6.6
120	12.9	310	11.4	500	7.9	690	6.6
130	12.9	320	11.4	510	7.8	700	6.6
140	12.8	330	11.3	520	7.6	710	6.6
150	12.6	340	11.2	530	7.5	720	6.6
160	12.3	350	11.2	540	7.4	730	6.6
170	12.4	360	11.2	550	7.3	740	6.5
180	12.3	370	11.1	560	7.2	750	6.5
190	12.2	380	10.9	570	7.2	760	6.5

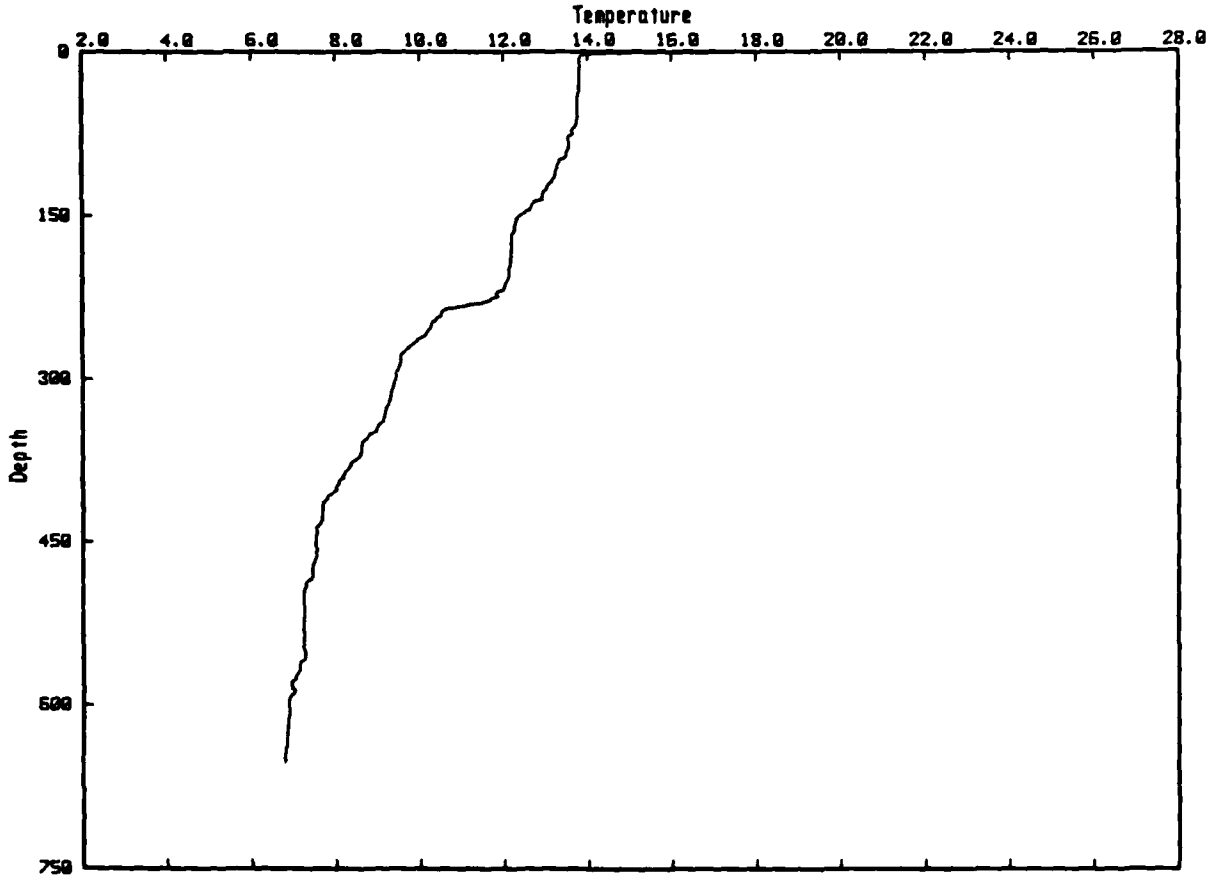
XBT DROP 225 28 26.4N 112 28.7W 9 MAR 85 2324 MST



XBT DROP 225 T-7 RADAR: SE 14.6nm 334T GULF COORDS: -23.6 214.9
JDAY 69 624Z DEPTH 970m/760m SST 13.50 2M TEMPS: SAIL 13.28 XBT 13.93
GULF OF CALIFORNIA: SILL LINE, CX3-18

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	13.5	200	11.8	390	9.4	580	7.5
20	13.5	210	11.6	400	9.4	590	7.2
30	13.5	220	11.2	410	9.3	600	7.1
40	13.5	230	11.1	420	9.2	610	7.1
50	13.4	240	11.0	430	9.0	620	7.0
60	13.4	250	10.9	440	8.9	630	7.0
70	13.4	260	10.6	450	8.8	640	6.9
80	13.4	270	10.4	460	8.5	650	6.9
90	13.3	280	10.2	470	8.5	660	6.9
100	13.3	290	10.0	480	8.2	670	6.8
110	13.2	300	10.0	490	8.0	680	6.8
120	13.0	310	10.0	500	8.0	690	6.8
130	13.0	320	10.0	510	7.9	700	6.8
140	12.9	330	9.9	520	7.7	710	6.8
150	12.9	340	9.9	530	7.7	720	6.7
160	12.8	350	9.8	540	7.7	730	6.7
170	12.8	360	9.7	550	7.6	740	6.7
180	12.6	370	9.6	560	7.6	750	6.7
190	12.3	380	9.5	570	7.6	760	6.7

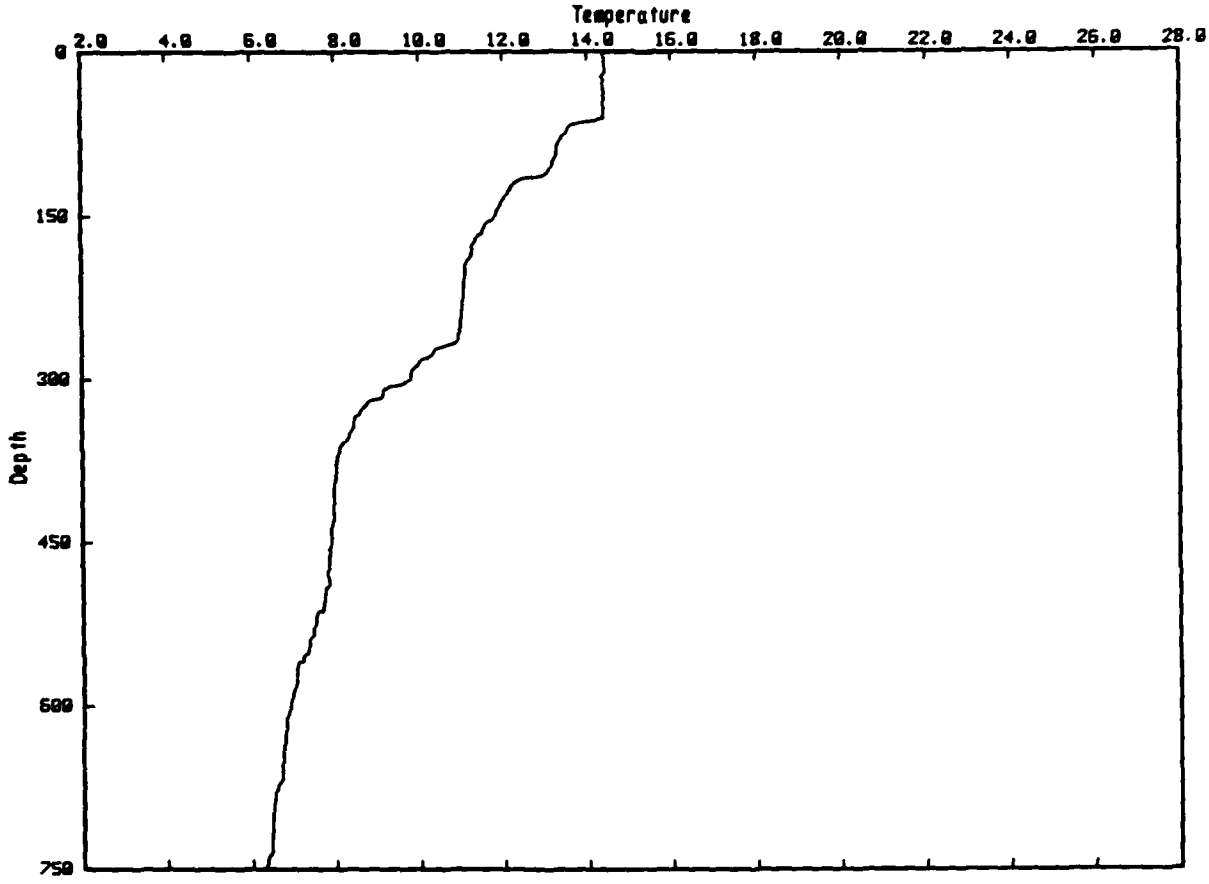
XBT DROP 226 28 24.0N 112 26.8W 9 MAR 85 2339 MST



XBT DROP 226 T-7 RADAR: SE 17.5nm 332T GULF COORDS: -23.7 209.5
JDAY 69 639Z DEPTH 653m/653m SST 13.86 2M TEMPS: SAIL 13.60 XBT 14.32
GULF OF CALIFORNIA: SILL LINE, CX3-19

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	13.8	200	12.1	390	8.2	580	6.9
20	13.8	210	12.1	400	8.0	590	7.0
30	13.8	220	11.8	410	7.8	600	6.9
40	13.8	230	11.5	420	7.7	610	6.9
50	13.8	240	10.5	430	7.7	620	6.9
60	13.7	250	10.3	440	7.5	630	6.8
70	13.7	260	10.1	450	7.5	640	6.8
80	13.5	270	9.8	460	7.5	650	6.8
90	13.5	280	9.5	470	7.5		
100	13.3	290	9.5	480	7.4		
110	13.2	300	9.4	490	7.3		
120	13.1	310	9.3	500	7.3		
130	12.9	320	9.3	510	7.2		
140	12.7	330	9.2	520	7.2		
150	12.4	340	9.1	530	7.2		
160	12.2	350	8.8	540	7.2		
170	12.2	360	8.6	550	7.3		
180	12.2	370	8.6	560	7.2		
190	12.2	380	8.3	570	7.1		

XBT DROP 227 28 22.6N 112 25.4W 9 MAR 85 2354 MST



XBT DROP 227 T-7 RADAR: none GULF COORDS: -23.4 206.1
JDAY 69 654Z DEPTH 900m/760m SST 14.49 2M TEMPS: SAIL 14.63 XBT 14.40
GULF OF CALIFORNIA: SILL LINE, CXJ-20

Z	TEMP	Z	TEMP	Z	TEMP	Z	TEMP
10	14.4	200	11.1	390	8.0	580	7.0
20	14.4	210	11.1	400	8.0	590	6.9
30	14.4	220	11.0	410	7.9	600	6.9
40	14.4	230	11.0	420	8.0	610	6.8
50	14.4	240	11.0	430	7.9	620	6.8
60	14.4	250	11.0	440	7.9	630	6.8
70	13.6	260	10.9	450	7.9	640	6.7
80	13.4	270	10.6	460	7.9	650	6.7
90	13.3	280	10.2	470	7.8	660	6.7
100	13.2	290	9.9	480	7.8	670	6.7
110	13.1	300	9.8	490	7.8	680	6.5
120	12.3	310	9.1	500	7.7	690	6.5
130	12.1	320	8.8	510	7.7	700	6.5
140	11.9	330	8.6	520	7.5	710	6.5
150	11.8	340	8.4	530	7.5	720	6.5
160	11.6	350	8.3	540	7.4	730	6.4
170	11.3	360	8.2	550	7.3	740	6.4
180	11.2	370	8.0	560	7.1	750	6.3
190	11.2	380	8.0	570	7.0	760	6.3

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APPENDICES

Appendix A

Program XBTFS.FTN

```
$BATCH
C       PROGRAM XBTFS
C
C
C       THIS PROGRAM MODIFIES DATA OUTPUT OF BATHY SYSTEMS
C       XBT DIGITAL CASSETTE RECORDER.  THE PADDED DATA
C       ARE FIRST STRIPPED OF THE MOST SIGNIFICANT BYTE OF THE
C       INTEGER*2 HEX VARIABLE (STRIPS OFF FIRST TWO CHARACTERS
C       USING 'ICBYTE'). NEXT, THE INDIVIDUAL DATA CHARACTERS
C       ARE RECOVERED BY SHIFTING BITS AROUND. FINALLY, THE DATA ARE
C       RECONSTRUCTED BY SCALING AND WRITTEN TO A FORMATTED FILE.
C
C       THIS PROGRAM PROCESSES THE WHOLE DATA CASSETTE AT ONCE.  IT
C       OPENS NEW STATION FILES AS THEY ARE ENCOUNTERED AND DELETES
C       GAPS IN DATA BY FRAME SYNCHING (SUBROUTINE FSCAN).  PROGRAM
C       NOW NUMBERS STATIONS CONSECUTIVELY, SO DOES NOT READ STATION
C       NUMBER AND ASSIGN TO FILE NAME.
C
C       C.A. PADEN, 6 AUGUST 1985: WRITTEN FOR SIO CCS PERKIN-ELMER
C       COMPUTER
C
C          HDR(J,1)-FLAG BIT
C          HDR(J,2)-JULIAN DAY
C          HDR(J,3)-HOUR
C          HDR(J,4)-MIN
C          HDR(J,5)-XBT PROBE TYPE
C          HDR(J,6)-XBT DROP NUMBER
C          HDR(J,7)-ELAPSED TIME IN SECONDS
C
C          XVAR(J,I)-CONVERSION OF HEX REPRESENTATION OF VOLTAGE
C                    MEASUREMENT TO INTEGER FORMAT
C
C
       INTEGER*2  DATA(2400),SBYT(100,48),JBLK(10)
       INTEGER*2  HDR(100,7),XVAR(100,10),M
       INTEGER*2  JUNK(800)
       INTEGER*4  IBLK(5)
       REAL       TE(100,10),TI(100,10),Z(100,10),V(100,10)
C
       EQUIVALENCE  (IBLK(1),JBLK(1))
C
       OPEN(12,FILE='XBT1.DTA',FORM='BINARY',IOSTAT=IOST)
       OPEN(13,FILE='XB6001.DTA',FORM='FORMATTED',STATUS='RENEW',
      *RECL=80)
       OPEN(14,FILE='CHKRUN',FORM='FORMATTED',STATUS='RENEW')
C
       WRITE(0,3)IOST
     3 FORMAT(1X,2I5)
       CALL SYSIO(IBLK,88,12,JUNK(1),1600,0)
       WRITE(0,2)JBLK(2)
     2 FORMAT(1X,Z4)

       J=0
       M=1
       N=1

       CALL SYSIO(IBLK,88,12,DATA(N),1600,0)

    40    CALL FSCAN(J,N,DATA,SBYT)
          CALL HEADER(J,SBYT,HDR)
          CALL CONDAT(J,SBYT,XVAR)
          CALL DEPTH(J,HDR(J,7),TI,Z)
          CALL TEMP(J,XVAR,V,TE)
C
             IF(HDR(J,1).EQ.1.AND.HDR(J-1,1).EQ.4) THEN
                CALL OPENF(J,HDR(J,6),M)
             ENDIF
C
          CALL PRINT(J,HDR,TI,V,Z,TE)

       IF(IOST)10,20,30
    10 GO TO 50
    20 GO TO 40
    30 WRITE(0,*) 'ERROR DETECTED,IOST- ',IOST
C
    50 CONTINUE
       WRITE(0,*)'END OF FILE'
```

```
      END
C
$PROG FSCAN
C     ****************************************
C     SUBROUTINE FSCAN(J,N,DATA,SBYT)
C     ****************************************

      INTEGER*2    DATA(800),FSBYT(800),JBLK(10)
      INTEGER*2    BYT(100,24),SBYT(100,48)
      INTEGER*4    IBLK(5)
C
      EQUIVALENCE (IBLK(1),JBLK(1))
C
CC    CHECK FOR BEGINNING OF DATA FRAME (FB--)
C
   10 FSBYT(N)-DATA(N)
      FSBYT(N)-ISHFT(FSBYT(N),-8)
      CALL ICBYTE(FSBYT(N),0)
      IF(FSBYT(N).EQ.251)THEN
         J-J+1
         IF(J.EQ.101) J-1
         DO 20 I-1,24
            BYT(J,I)-DATA(N)
            CALL ICBYTE(BYT(J,I),0)
               K-2*I-1
            SBYT(J,K)-ISHFT(BYT(J,I),-4)
            SBYT(J,K+1)-IAND(BYT(J,I),X'000F')
               N-N+1
            IF(N.EQ.801)THEN
               N-1
               CALL SYSIO(IBLK,88,12,DATA(N),1600,0)
            ENDIF
   20    CONTINUE
      ELSE
            N-N+1
               IF(N.EQ.801)THEN
                  N-1
                  CALL SYSIO(IBLK,88,12,DATA(N),1600,0)
               ENDIF
            GO TO 10
      ENDIF
      END
C
$PROG HEADER
C     ****************************************
      SUBROUTINE HEADER(J,SBYT,HDR)
C     ****************************************

C     RECONSTRUCT STATION HEADER INFORMATION
C     BY SCALING RELATIVE BYTES AND SUMMING

      INTEGER*2  SBYT(100,48),HDR(100,7)

      HDR(J,1)-SBYT(J,3)
      HDR(J,2)-SBYT(J,4)*100+SBYT(J,5)*10+SBYT(J,6)
      HDR(J,3)-SBYT(J,7)*10+SBYT(J,8)
      HDR(J,4)-SBYT(J,9)*10+SBYT(J,10)
      HDR(J,5)-SBYT(J,11)
      HDR(J,6)-SBYT(J,12)*100+SBYT(J,13)*10+SBYT(J,14)
      HDR(J,7)-SBYT(J,15)*1000+SBYT(J,16)*100+SBYT(J,17)*10+
     *SBYT(J,18)
      END

$PROG CONDAT
C     ****************************************
      SUBROUTINE CONDAT(J,SBYT,XVAR)
C     ****************************************

C     RECONSTRUCT OUTPUT VOLTAGE BY SCALING
C     APPROPRIATE DATA BYTES AND SUMMING

      INTEGER*2    SBYT(100,48),XVAR(100,10)

      K-19
      DO 10 I-1,10
      XVAR(J,I)-SBYT(J,K)*256+SBYT(J,K+1)*16+SBYT(J,K+2)
      K-K+3
```

```
   10 CONTINUE
      END
C
$PROG DEPTH
C     ****************************************
      SUBROUTINE DEPTH(J,ISEC,TI,Z)
C     ****************************************

C     CALCULATE DEPTH FROM TIME(SECONDS) GIVEN
C     IN HEADER INFORMATION, USING SIPPICAN
C     EQUATION

      INTEGER*2    ISEC
      REAL         TI(100,10),Z(100,10)

      DO 10 I=1,10
      TI(J,I)=FLOAT(ISEC-1)+0.1*(I)
      IF(ISEC.EQ.0)THEN
         TI(J,I)=0.
      ENDIF
      Z(J,I)=(6.472*TI(J,I))-0.00216*(TI(J,I)**2)
   10 CONTINUE
      END

$PROG TEMP
C     ****************************************
      SUBROUTINE TEMP(J,XVAR,V,TE)
C     ****************************************

C     CALCULATE TEMPERATURE IN DEGREES CELCIUS
C     FROM OUTPUT VOLTAGE USING SIPPICAN EQUATION

      INTEGER*2    XVAR(100,10)
      REAL         TE(100,10),V(100,10)

      DO 10 I=1,10
      V(J,I)=5.0*(FLOAT(XVAR(J,I))/4095)
      TE(J,I)=-1.97539+(8.46492*V(J,I))-((5.76449E-01)*(V(J,I)**2))
     *+8.31771E-02*(V(J,I)**3)-1.18495E-03*(V(J,I)**4)
   10 CONTINUE
      END

$PROG PRINT
C     ****************************************
      SUBROUTINE PRINT(J,HDR,TI,V,Z,TE)
C     ****************************************

C     WRITE HEADER AND DATA TO OUTPUT FILE

      INTEGER*2    HDR(100,7)
      REAL         TE(100,10),TI(100,10),Z(100,10),V(100,10)

      DO 10 I=1,10
      WRITE(13,5)(HDR(J,K),K=1,6),TI(J,I),V(J,I),Z(J,I),TE(J,I)
    5 FORMAT(6I5,4F10.3)
   10 CONTINUE
      END

$PROG OPENF
C     ****************************************
      SUBROUTINE OPENF(J,NDROP,M)
C     ****************************************

C     THIS SUBROUTINE OPENS NEW DATA FILE
C     WHEN EOF CODE ENCOUNTERED ON DATA CASSETTE

      CHARACTER*3     MM
      CHARACTER*10    FNAME
      INTEGER*2       NDROP,M

C     CLOSE PREVIOUS FILE

      CLOSE(13)

C     CONSTRUCT XBT NUMBER AS A CHARACTER STRING

      M=M+1
```

```
      IF(M.EQ.46) THEN
         WRITE(0,*)'FIRST 45 FILES WRITTEN TO DISK'
         STOP
      ENDIF

      WRITE(MM,2)M
    2 FORMAT(I3)
      IF(M.LT.10)MM(1:2)='00'
      IF(M.GE.10.AND.M.LT.100)MM(1:1)='0'

C     CONSTRUCT FILENAME

      FNAME(1:3)='XB6'
      FNAME(4:6)=MM
      FNAME(7:10)='.DTA'

C     OPEN NEXT FILE AND TYPE HEADINGS

      OPEN(13,FILE=FNAME,FORM='FORMATTED',STATUS='RENEW',
     *RECL=80)

      WRITE(14,3)FNAME,NDROP
    3 FORMAT(A10,2X,I5)
      IF(M.NE.NDROP) THEN
         WRITE(14,4)FNAME
    4    FORMAT(10X,'STATION/DROP# MISMATCH AT ',A10)
      ENDIF

      WRITE(13,5)FNAME,NDROP
    5 FORMAT(A10,':  XBT #',I5,', GULF OF CALIFORNIA, NOV 84')

      WRITE(13,6)
    6 FORMAT(1X,'FLAG',1X,'JDAY',3X,'HR',2X,'MIN',2X,'TYP',
     *3X,'NO',5X,'SECS',6X,'VOLTS',5X,'DEPTH',5X,'TEMP')

      END
$BEND
```

Appendix B

Program DIGSCL.F77

```
C       PROGRAM DIGSCL

C       THIS PROGRAM SCALES AND CORRECTS HAND-DIGITIZED SIPPICAN T7 & T4
CC      XBT TRACES, ACCOUNTING FOR OFFSETS IN XBT CHART PLACEMENT AND
CC      VOLTAGE CALIBRATION POINTS, AS WELL AS NON-LINEARITIES IN
CC      DEPTH AND TEMPERATURE.  THE PROGRAM FOR DIGITIZING TRACES
CC      ASSIGNS PLOT ORIGIN AS DATA(1), X-LIMIT OF PLOT AS DATA(2),
CC      Y-LIMIT OF PLOT AS DATA(3), AND BEGINS SCANNING AT DATA(4).
CC      FOR THIS DATA SET, DATA(4) GIVES X-Y OFFSET, AND DATA(5)
C       BEGINS SCANNING MODE.

C       DISTANCES IN DIGITIZER UNITS(INCHES) ARE CALCULATED RELATIVE
CC      TO A PRE-LAUNCH CALIBRATION LINE WHICH CORRESPONDS TO AN AVERAGE
CC      VOLTAGE OF 2.476V FOR THE INSTRUMENTS USED.  FORTY-FIVE OF
CC      THE 205 XBT DROPS WERE ELECTRONICALLY DIGITIZED ON A BATHY
CC      SYSTEMS DIGITIZER.  SEVERAL OF THESE STATIONS WERE ALSO
CC      HAND DIGITIZED TO CALCULATE THE VOLTAGE SCALE FOR THE ANALOG
CC      RECORDER.  X-POSITIONS FROM THE CHART RECORDER
CC      ARE CONVERTED TO VOLTAGES USING A SLOPE OF 0.6995V/IN
CC      CALCULATED FROM REGRESSING CORRESPONDING VOLTAGES AGAINST
CC      PARTICULAR CHART POSITIONS AND ADDING A CALIBRATION VOLTAGE
CC      OF 2.476V WHICH IS EQUIVELENT TO REPOSITIONING TRACE SO THAT
CC      CALIBRATION LINE IS AT 3.495 INCHES FROM CHART ORIGIN AS
CC      EXPECTED FOR NORMAL CALIBRATION.
CC
CC      C.A. PADEN, 5 MAR 1986
CC      PROGRAM WRITTEN TO RUN ON SIO SHORE PROCESSES DATA GENERAL
C       COMPUTER

        CHARACTER*28  INFIL,OUTFIL,EDTFIL,ERRFIL
        CHARACTER*18  HDRFIL
        CHARACTER*3   NDROP,PNT,MO
        INTEGER       B(1500),LATDEG,LNGDEG,ZPDR,ZXBT,TIME,BRG,GMT
        REAL          X(1500),Y(1500),XP(1500),YP(1500)
        REAL          V(1500),Z(1500),SECS(1500),TE(1500)
        REAL          XSCALE,YSCALE,CALIB,YOFF,LATMIN,LNGMIN


        WRITE (*,*)'ENTER 3-DIGIT XBT DROP NUMBER (i.e., 003)'
        READ(*,1)N
      1 FORMAT(I3)
        WRITE(NDROP,1)N
        WRITE(*,111)NDROP
    111 FORMAT(A3)

        IF(N.LT.10)NDROP(1:2)='00'
        IF(N.GE.10.AND.N.LT.100)NDROP(1:1)='0'

        INFIL(1:18)=':CAPDAT:DIGDAT:XBT'
        INFIL(19:21)=NDROP
        INFIL(22:28)='      '
        WRITE(*,*)INFIL

        EDTFIL(1:18)=':CAPDAT:DIGDAT:XBT'
        EDTFIL(19:21)=NDROP
        EDTFIL(22:28)='.EDT   '
        WRITE(*,*)EDTFIL

        HDRFIL(1:11)='HEADERS:XBT'
        HDRFIL(12:14)=NDROP
        HDRFIL(15:18)='.HDR'
        WRITE(*,*)HDRFIL

        OUTFIL(1:18)=':CAPDAT:DIGDAT:XBT'
        OUTFIL(19:21)=NDROP
        OUTFIL(22:28)='.SCL   '
        WRITE(*,*)OUTFIL

        OPEN(13,FILE=HDRFIL,FORM='FORMATTED',STATUS='OLD')
        OPEN(15,FILE=INFIL,FORM='FORMATTED',STATUS='OLD',IOSTAT=ISTAT)
        OPEN(16,FILE=EDTFIL,STATUS='FRESH',IOSTAT=IOST)
        OPEN(17,FILE=OUTFIL,STATUS='FRESH')

C       REWRITE DIGITZED DATA FILE TO ONE-DIMENSIONAL ARRAY FOR
C       EDITING

        IF(ISTAT.GE.0)THEN
```

```
   60     READ(15,2,END=70) (X(I),Y(I),B(I),I=1,5)
    2     FORMAT(5(2F7.3,I2))
          DO 10 I=1,5
          WRITE(16,3) X(I),Y(I),B(I)
    3     FORMAT(2F7.3,I2)
   10     CONTINUE
          GO TO 60
       ENDIF
   70     WRITE(*,*)'EDTFIL CREATED'

          CLOSE(15)
          CLOSE(16)

C         WRITE HEADER TO OUTPUT FILE

          OPEN(13,FILE=HDRFIL,FORM='FORMATTED',STATUS='OLD')
          READ(13,11)NDROP,ITYPE,IDAY,MO,IYR,TIME,JDAY,GMT
          READ(13,12)LATDEG,LATMIN,LNGDEG,LNGMIN,PNT,RNG,BRG
          READ(13,13)XR,YR,ZPDR,SST,TSAIL
   11     FORMAT(A3,I2,I3,A4,I3,3I5)
   12     FORMAT(I2,F5.1,I4,F5.1,A4,F5.1,I4)
   13     FORMAT(F5.1,F6.1,I5,F6.2,F6.2)

          WRITE(17,7) NDROP,ITYPE,IDAY,MO,IYR,TIME,JDAY,GMT,
         *LATDEG,LATMIN,LNGDEG,LNGMIN,PNT,RNG,BRG,XR,YR,
         *ZPDR,SST,TSAIL
    7     FORMAT('DROP ',A3,'  T',I1,3X,I2,1X,A3,1X,I2,2X,I4,'L   J',
         *I3,2X,I4,'Z',/,I2,1X,F4.1,' N',2X,I3,1X,F4.1,' W',3X,
         *A3,2X,F4.1,'NM @ ',I3,'T',/,2F5.1,2X,I4,'M',2X,'SST ',
         *F5.2,2X,'2MT ',F5.2)

          WRITE(*,*)'WROTE HEADER TO OUTPUT FILE'

          CALIB=0
          YOFF=0

C         CALCULATE SCALING AND ORIENTATION OF GRID

          OPEN(16,FILE=EDTFIL,FORM='FORMATTED')

          DO 15 J=1,4
          READ(16,3)X(J),Y(J),B(J)
          WRITE(*,3)X(J),Y(J),B(J)
   15     CONTINUE
          WRITE(*,*)'READ FIRST 4 POINTS'

C         ROTATE REFERENCE FRAME OF DIGITIZER GRID INTO THAT FOR XBT
C         TRACE

          THETA=ATAN(Y(2)/X(2))
          WRITE(*,*)' CALCULATED THETA= ',THETA

          DO 20 J=1,4
             XP(J)=X(J)*COS(THETA)+Y(J)*SIN(THETA)
             YP(J)=-X(J)*SIN(THETA)+Y(J)*COS(THETA)
          WRITE(*,3)XP(J),YP(J),B(J)

   20     CONTINUE

C         SET CONSTANTS FOR FOURTH-ORDER POLYNOMIAL EQUATION FOR
C         CALCULATING TEMPERATURE FROM VOLTAGE

             ALPHA=-1.97539
             BETA=8.46492
             GAMMA=-5.76449E-01
             DELTA=8.31771E-02
             EPSI=-1.18495E-03

C         SET SLOPE AND OFFSET CALCULATED FROM REGRESSION OF CHART
C         POSITION VERSUS CORRESPONDING VOLTAGE REGISTERED ON BATHY
C         SYSTEMS DIGITIZER.

             SLOPE=0.6995
             OFFSET=0.032
```

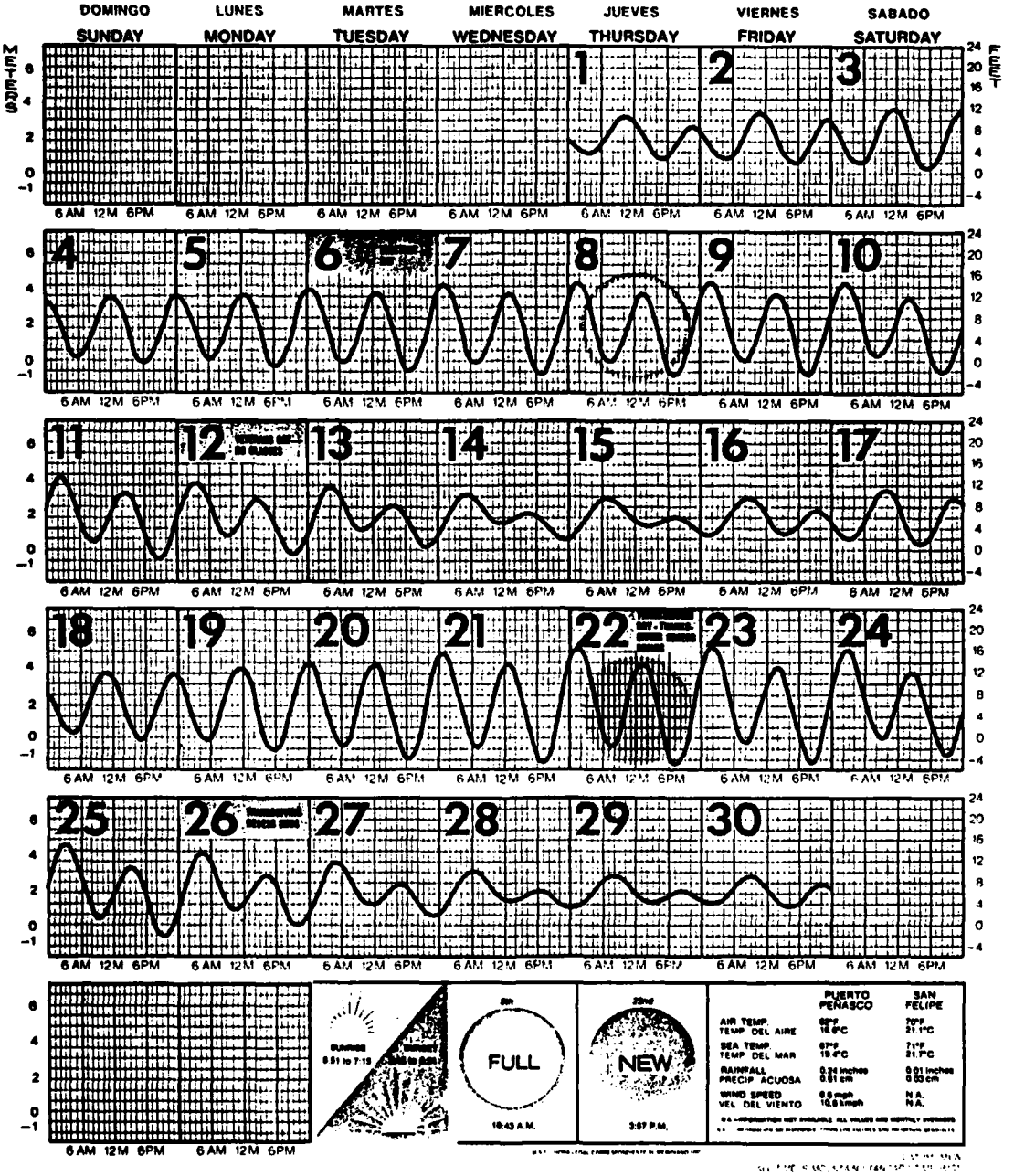
```
C      CALCULATE CHART POSITION OF PRE-LAUNCH CALIBRATION LINE
C      AND DEPTH OFFSET DUE TO VERTICAL CHART MISALIGNMENT DURING
C      ANALOG RECORDING

          CALIB=XP(4)
          YOFF=YP(4)

C         RESET REFERENCE FRAME OF PLOT TO APPROPRIATE POSITION
C         AS A FUNCTION OF CHART POSITION

          CDIFF=3.495-CALIB
          IF(CDIFF.LT.0.)THEN
             REF=3.495
          ELSE
             REF=CALIB
          ENDIF

         WRITE(*,*)CDIFF,CALIB,REF
C      CALCULATE CALIBRATION POINT TEMPERATURE AS CHECK

          TEMP=0
          WRITE(*,*)CALIB,REF
          XP(4)=XP(4)-CALIB
          V(4)=SLOPE*XP(4)+SLOPE*REF+OFFSET
          TEMP=ALPHA+BETA*V(4)+GAMMA*V(4)**2+DELTA*V(4)**3+EPSI*V(4)**4

       WRITE(*,*)'CALIB VOLTAGE= ',V(4),'CALIBRATION TEMP= ',TEMP


   24  READ(16,3)X(I),Y(I),B(I)
         IF(B(I).NE.3.)GOTO 24
       I=1
   25  IF(IOST.GE.0)THEN
       READ(16,3,END=30) X(I),Y(I),B(I)
          XP(I)=X(I)*COS(THETA)+Y(I)*SIN(THETA)
          YP(I)=-X(I)*SIN(THETA)+Y(I)*COS(THETA)

          IF(X(I).EQ.X(I-1).AND.Y(I).EQ.Y(I-1)) GOTO 25
          IF(B(I).EQ.3) CALL EDIT(I,XP,YP,B)
          IF(B(I).EQ.4) THEN
             I=I-1
             GO TO 30
          ENDIF

C      CONVERT X-POSITION IN INCHES GIVEN BY DIGITIZER TO TEMPERATURE
C      USING CALIBRATION POINT AS REFERENCE

          XP(I)=XP(I)-CALIB
          V(I)=SLOPE*XP(I)+SLOPE*REF+OFFSET
          TE(I)=ALPHA+BETA*V(I)+GAMMA*V(I)**2+DELTA*V(I)**3+EPSI*V(I)**4

C      CONVERT Y-POSITION IN INCHES GIVEN BY DIGITIZER TO TIME USING
C      CHART SPEED OF 1 INCH PER 15 SECONDS.  SINCE Y-POSITION IS
C      NEGATIVE AS READ BY DIGITIZER, MULTIPLY BY -15 TO GET POSITIVE
C      SECONDS.

          SECS(I)=(YP(I)-YOFF)*(-15)

C      CONVERT TIME TO DEPTH USING SIPPICAN EQUATION FOR T-7'S

         Z(I)=6.472*SECS(I)-0.00216*(SECS(I)**2)

       I=I+1

       GO TO 25
       ENDIF


C      WRITE TO FILE

   30  WRITE(17,4)CALIB,YOFF
    4  FORMAT(/,'CALIB LINE (INCHES): ',F5.3,'   Y-OFFSET: ',F5.3)
       WRITE(17,5)SLOPE,OFFSET
    5  FORMAT('SLOPE(V/IN): ',F5.4,2X,'  CALIB OFFSET(V): ',F5.3,/)

       DO 40 J=1,I
          WRITE(17,6) YP(J),XP(J),V(J),Z(J),TE(J)
```

```
  6    FORMAT (3F8.3,F8.1,F8.2)
 40 CONTINUE
    WRITE(*,*)'END OF FILE'
    STOP
    END
C     ****************************************
C     SUBROUTINE EDIT(I,XP,YP,B)
C     ****************************************

C     Subroutine to edit out mistakes made when hand digitizing.
C     Takes first point after stop sampling signal (button 3)
C     and moves up in data array to position where sampling
C     was resumed (button 1), so that the data which follows
C     writes over bad data in array.

      INTEGER     I,N,B(1500)
      REAL        XP(1500),YP(1500)

      N=I
      WRITE(*,*)'IN EDIT, I= ',N
      DO 10 K=1,N

         IF(YP(I).LT.YP(K).AND.YP(I).GT.YP(K+1))THEN
              YP(K+1)=YP(I)
              XP(K+1)=XP(I)
              B(K+1)=B(I)

              I=K+1
              GO TO 20

         ENDIF
 10 CONTINUE
    WRITE(*,*)'EXITING EDIT, I= ',I
 20 END
```

Appendix C

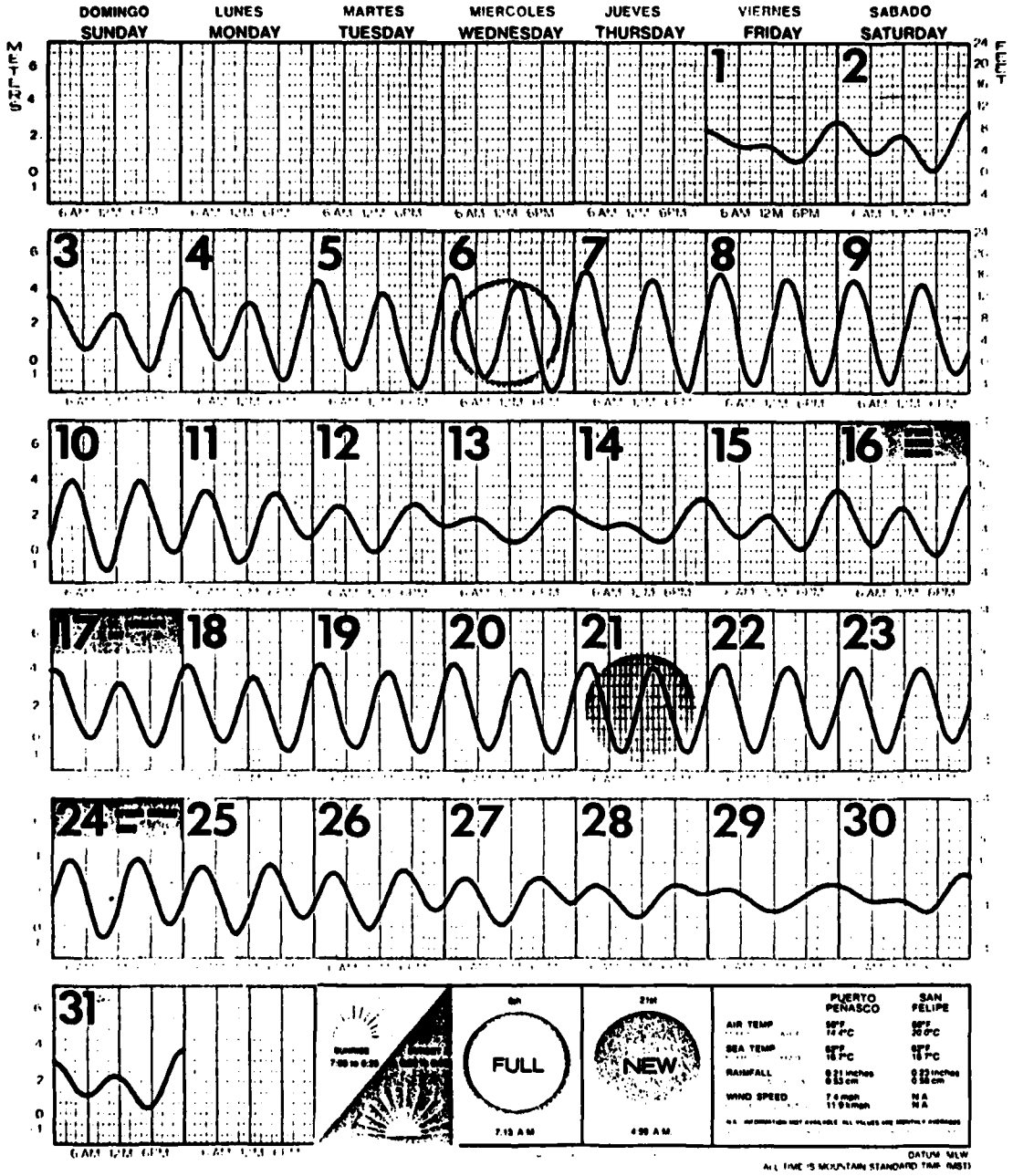
Sea Level Elevations for the Northern Gulf of California

NOVIEMBRE / NOVEMBER 1984



(from: 1984 Tide Calendar for the Northern Gulf of California, University of Arizona)

MARZO/MARCH 1985



(from: 1985 Tide Calendar for the Northern Gulf of California, University of Arizona)

END

10-86

DTIC